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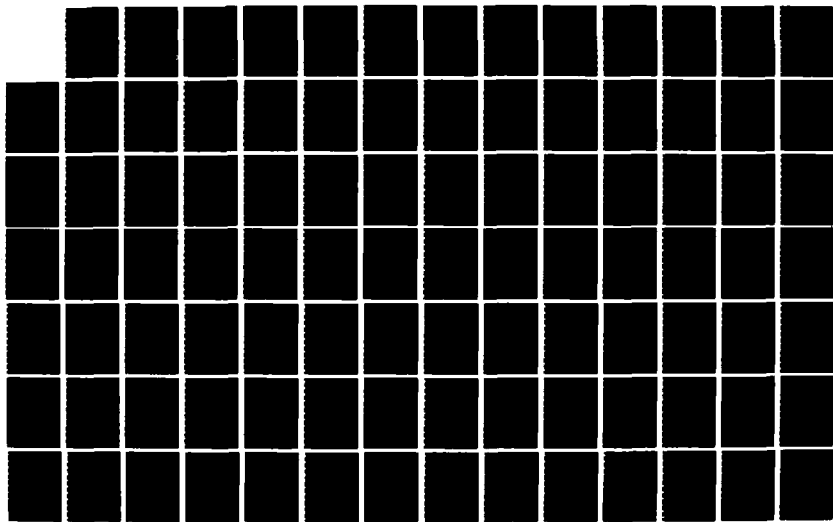
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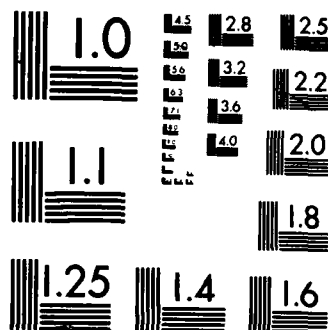
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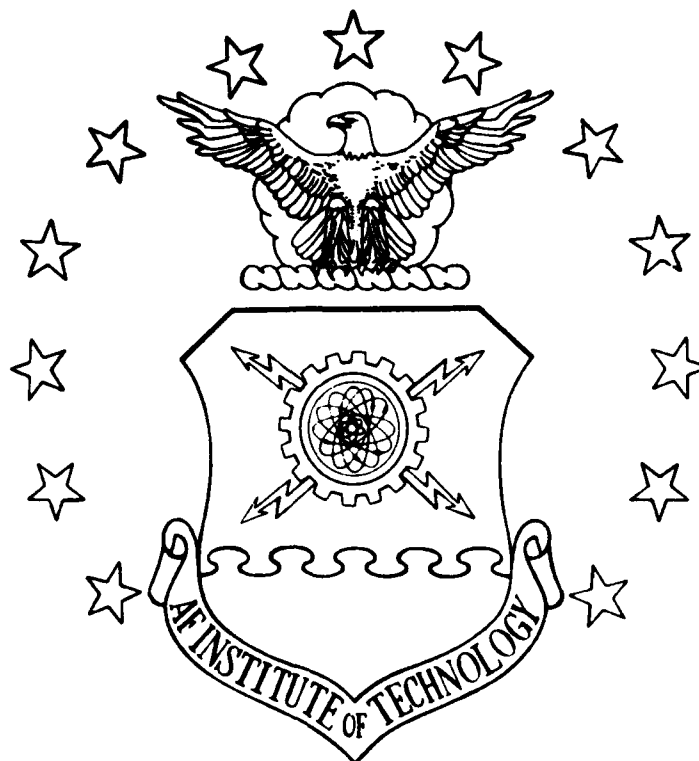
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AIR FORCE MANAGERS

THESIS

Wayne R. Byron  
Captain, USAF

AFIT/GLM/LSM/86S-10

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STRESS MANAGEMENT: A HANDBOOK FOR  
AIR FORCE MANAGERS

THESIS

Presented to the Faculty of the School of Systems and Logistics  
of the Air Force Institute of Technology  
Air University  
In Partial Fulfillment of the  
Requirements for the Degree of  
Master of Science in Systems Management

Wayne R. Byron, B.A.

Captain, USAF

September 1986

Approved for public release; distribution unlimited

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Wayne R. Byron

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Abstract

This study researched the applicable literature on stress. Emphasis was placed on management of organizational stress. A comprehensive literature review was used to define stress, determine how to recognize stress, determine how stress affects work performance, determine what the manager can do about stress, and determine the value of stress management skills to the Air Force. Positive support was found for the effectiveness of stress management strategies employed by the manager to reduce or eliminate workplace stress. Workplace stressors were shown to have an adverse effect on the productivity of organizations and personnel. Lost productivity most often resulted from absenteeism, illness, and dysfunctional behavior. Research showed that the manager able to use stress management techniques and strategies could successfully reduce or eliminate workplace stress and subsequently improve individual and organizational productivity. The handbook developed as an appendix to this thesis is a compendium that condenses stress management information in a manner that is easily accessible to the manager.

## STRESS MANAGEMENT: A HANDBOOK FOR AIR FORCE MANAGERS

### I. Introduction

The most important asset of the United States Air Force is its people. Variations of this sentiment have been expressed by leaders at all echelons of the Air Force and the Department of Defense (DOD). General Charles Gabriel, former United States Air Force Chief of Staff counts Air Force people as his top priority (91:3). Former Deputy Secretary of Defense Frank C. Carlucci considered people as, "the most important variable in the national security equation" (9:11). Similarly General Robert H. Barrow, Commandant of the Marine Corps said that, "the one resource that most directly impacts on Marine Corps readiness is the individual Marine" (4:22). Air Force managers lead and manage people in performing Air Force and DOD missions in support of national objectives. For the purposes of this study, the term "manager" can be considered as being synonymous with "leader" or "supervisor". A manager can be operationally defined as anyone having the authority and responsibility for accomplishing specific objectives/goals for an organization through judicious use of personnel and materiel resources. Any factor which hampers the performance of personnel must concern the manager.

Stress is often cited as the root cause of dysfunctional behavior, illness, and impaired worker effectiveness (8; 19; 22; 30; 33; 45; 47; 54; 58; 61; 86). Recognition of stress situations and reactions to those situations in the work environment is an essential management skill. Air Force managers could add a new dimension to their management skills by learning to recognize stress situations/reactions and taking appropriate corrective measures that would improve the work environment and enhance the overall effectiveness of the organization thereby helping ensure successful mission accomplishment.

The size of an individual task does not matter. Each task must be successfully and conscientiously performed to achieve overall success of the mission. An individual experiencing a negative stress response may find that that response is interfering with job performance. At this point, the individual's stress situation becomes the concern of the manager.

#### Problem Statement

Air Force managers routinely encounter stressors in the work environment. A stressor is an internal or external impingement on the individual (50;464). Many managers do not handle stressors effectively. Their failure to do so is often due to ignorance of stress symptoms and adequate coping strategies. Although increased media focus on stress has fostered increased awareness of stress, general

understanding of stress and the ability to recognize it is still not widely perceived as a necessary concern of managers. To improve the management effectiveness and leadership dimension, learning to positively manage stress in the workplace is a necessity.

The ability to recognize stressors is important because stress can have both beneficial and harmful effects (1; 70; 74; 75; 80). Air Force managers must learn to distinguish harmful stressors from those which are helpful. Having learned to recognize stressors, the manager may be able to take steps to positively adjust the stressful situation as far as it affects work performance. The manager will then be equipped to tackle the question of how much pressure to perform is too much.

There is a great deal of current information concerning stress. However; it is so diverse and, sometimes, so technical it would prove prohibitively time consuming for a manager to attempt to acquire that information necessary to do an effective job of stress recognition and management. There is a need to provide a condensed source of stress management information which will assist the Air Force manager in dealing with stress in the work environment. One form this source of information can take is that of a handbook. The handbook will be a synthesis of past and current thinking on the subject of stress management. In

clear and simple language, the handbook will provide an easy to use reference concerning stress in the workplace.

### Scope

To make the stress management handbook a useful tool for managers, several questions vital to understanding the stress phenomena must be resolved.

1. What is stress? Here we must define the concept, determine how to recognize its occurrence, and its causes.
2. How does stress affect work performance? This area will focus on positive and negative effects of stress on job performance.
3. How can the Air Force manager positively manage stress in the work place? This area will focus on stress management strategies which can be readily employed by the manager.
4. What is the value of stress management skills to the Air Force manager? Here the focus is on the recognition of cost savings and performance improvement possible when stress management principles are utilized.

Answering these questions involved an extensive literature review. The literature review served as the basis for condensation and adaptation of clinical and theoretical perspectives into a handbook for managers. Most research efforts in this area are in the civil sector.

However, military interest in this area is growing (3; 18; 23; 27; 37; 40; 41; 52; 63; 64; 67; 68; 69; 81; 84; 86; 95).

#### Purpose

The objective of this research is to foster awareness of stress and develop a stress management handbook, or primer, to be used as a resource by Air Force managers. This handbook will provide managers with stress management methods for dealing with worker stress and stressful situations which hamper job performance. Use of this handbook could increase the ability of the manager to elicit and maintain higher levels of performance and production from his personnel resources.

## II. Methodology

### Background

My primary objective in conducting this research is to prepare a stress management handbook. This handbook is designed for use by Air Force managers attempting to reduce adverse stress in the workplace. An extensive literature review was the method of choice here for ensuring inclusion of significant material. While available literature primarily addresses civilian organizations, the concepts and techniques encountered in the literature are adaptable to the military environment. Some specific characteristics that make the military work environment unique are:

1. A military member is considered to be on duty 24 hours a day.
2. A member who is called in early or stays late is entitled to no additional compensation.
3. A military organization is not a democratic one. Therefore, such things as grievance procedures and compensation are rigidly proscribed.
4. A military member is usually allowed to call in sick for short duration illnesses at the discretion of his individual supervisor or unit. However, like his civilian counterpart chronic absence of this nature will warrant that his illness be substantiated by medical personnel. Absenteeism, as a coping mechanism, is normally available to military personnel on a limited basis depending on the degree of visibility of their duty position.
5. Seeking professional help for emotional problems can result in more problems for a military member. An individual who enlists the aid of a military organization such as Family Services or Mental Health risks having his situation reported back to his unit. "Emotional instability" could be a major drawback to obtaining/retaining a desired position.

6. Many situations which would be viewed as "personal concerns" in a civilian organization are considered job related in the military (unit commanders often get involved when they learn that personnel in their command display signs of personal or financial irresponsibility, for example).
7. As a member of the military, the individual is expected to uphold military ideals and discipline on or off the job.
8. If he is apprehended by civil law enforcement authorities (for being drunk and disorderly, for example) The member's supervisor and commander will know about it almost immediately.
9. Military jobs are concerned with capability and readiness to provide for national defense, not the profit motive as in the corporate sector. Subsequently the reason or rationale for actions deemed necessary by superiors is sometimes obscure.

Personnel resources are important to any organization in terms of salaries, experience, and knowledge. Efforts to remediate or rehabilitate dysfunctional personnel are vital to organizational productivity. Adverse stress is an obstacle to maintaining an effectively functioning organization. The Air Force manager must be aware of the value of stress management skills in relationship to organizational success. He must be capable of defining and recognizing stress. The manager must be able to use effective strategies to aid in the control of stress in the workplace. The handbook which will be part of this thesis could be an important tool in achieving these goals.

#### Procedures

A literature review of books, periodicals, journals, and other pertinent resources serves as the basis for this

study. Primary bibliography searches were conducted in the libraries at The Air Force Institute of Technology, Wright State University, and the University of Dayton. Searches were also conducted through the Defense Logistics Studies Information Exchange and the Defense Technical Information Center.

The following procedural steps will be necessary to accomplish the research objective.

1. Examine both Department of Defense and civilian bibliographical data bases to determine available references.
2. Conduct a comprehensive literature review to serve as a basis for the research.
3. Use the literature review as the primary medium for answering the investigative questions and any supplements thereto.
4. Prepare a stress management handbook as an appendix. This product will provide Air Force managers with a resource which can be used as an aid in managing stress situations in the workplace.

### Conclusion

The Air Force manager must be able to recognize, identify, manage, and evaluate the severity of adverse stressors and how they will impact the work environment. There is a great deal of information available in the area of stress management on the job. However, most of this is directed at civilian organizations. This information is diverse and often presented in complex language. The Air Force manager may not have the time,

patience, or knowledge necessary to get the specific information required.

By examining available information and condensing it into a manageable handbook, a potentially valuable tool can be added to the Air Force manager's repertoire. A manager armed with stress management skills and strategies could be a valuable asset in maintaining the highest levels of effectiveness and productivity of available human resources.

People are the most important resource of an Air Force organization. Productive Air Force personnel are irreplaceable. They are vital to successful accomplishment of the Air Force mission. Anything which enhances their performance enhances the mission of the Air Force and helps ensure attainment of national objectives.

### III. Literature Review

#### Background

The preponderance of the literature indicates that stress in the workplace is a major contemporary problem (1; 5; 34; 36; 45; 68; 70; 76; 86; 92). On an individual level, it is seen as the cause of deleterious effects on mental and physical health. On an organizational level, the effects of stress exact an enormous economic toll (1; 8; 70; 74; 75). Moreover, the problem is growing. Ivancevich and Matteson observed that stress does affect productivity and that environmental stressors, coupled with the poor stress management skills of the average person, can seriously disrupt personal and organizational systems (45:18). Loss of individual and organizational effectiveness and productivity is often attributable to stress that, for one reason or another, the individual worker or manager was unable to control (47:61; 97:151).

Considering the aforementioned assessment, Air Force managers must be concerned with efforts to eliminate or reduce stress in the work environment.

Leon Warshaw indicates that an organization's productivity and viability are dependent on how well or how badly its people perform (92:5). Concern for human aspects of the workplace is not just humanitarian activity, the threat of personal and organizational breakdown motivates organizations to tackle the stress problem (34:19-20).

The manager is in a position to defuse this situation if he can recognize it, apply appropriate strategies to combat negative effects, and realize the value of positive action. With this in mind, the Air Force manager must be able to find answers to the following questions.

1. What is stress?
2. Can stress affect work performance?
3. Can stress be controlled?
4. Is stress control of any value to the Air Force?

#### What is Stress?

The definitions of stress may be as numerous as the differences in the human personality. The perspective of the individual researcher has some effect on the way in which a situation may be defined as stressful. One man's stress may be another's motivator. However, I hazard to state that all thinking individuals experience stressful situations and can define stress as it applies to them.

Stress is "a physical, chemical, or emotional factor that causes bodily or mental tension and may be a factor in disease causation" (96:1151). Another view of stress considers it as "a physical, mental, and emotional reaction to situations that cause fear, uncertainty, danger, excitement, irritability, confusion, or change" (29:1). Stress has also been described as "the physiological or psychological response you make to an external event or condition called a stressor" (57:9). In an article

appearing in the May-June 1983 Air University Review, stress is described as "the naturally occurring patterned experience that we all have in response to any demand placed on us" (69:79). In the book, Abnormal Psychology and Modern Life; stress is viewed as adjustive demands placed on us by environmental and personal obstacles (14:109).

We can see that there are a variety of ideas which constitute the definition of stress. All these ideas have merit in themselves and are adaptive to individual situations.

Probably the most widely respected and pursued position on stress is that of Hans Selye, a Canadian physician who pioneered stress research and has been the preeminent authority on the subject since 1936. Selye defined stress as "the non-specific response of the body to any demand" (78:127). Selye, in fact, coined the term "stress syndrome" and described it as the General Adaptation Syndrome (G.A.S.); the "body's adaptive reactions, its mechanisms of defense against stress" (75:3). The G.A.S. is manifested in three stages during the course of prolonged exposure to stress or stressful situations (Fig. 1).

- Stage 1. Alarm Reaction (A.R.), consists of a general mobilization of the body's defensive forces.
- Stage 2. Stage of Resistance (S.R.), consists of a relaxation of the body's defensive posture and adaptation to a perceived threat.
- Stage 3. Stage of Exhaustion (S.E.), consists of reactions similar to the A.R. stage and

results in premature aging from wear and tear on body tissues (75:31-32).

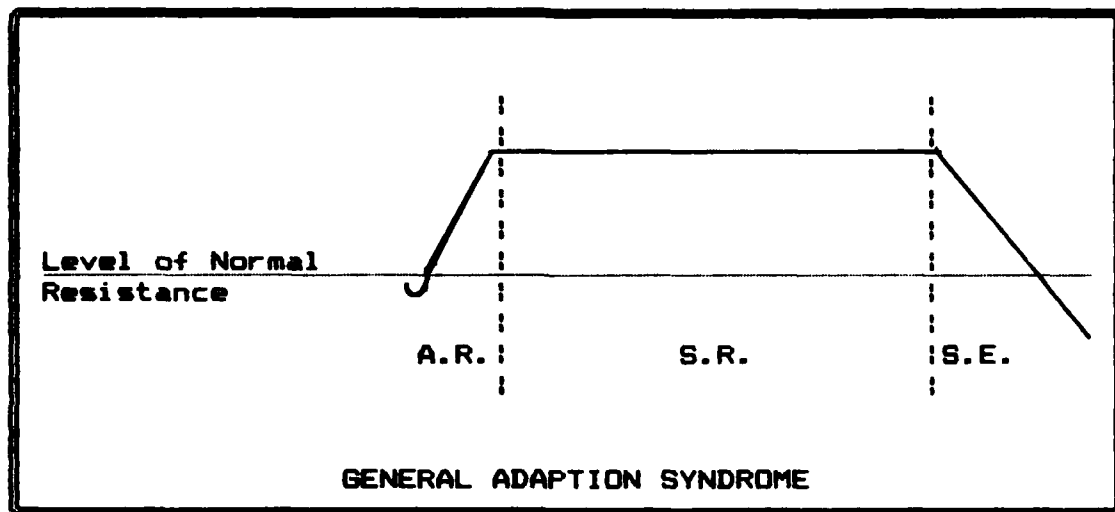


Figure 1. General Adaptation Syndrome (adapted from 75:87).

Richard S. Lazarus, in his research, has taken a different view from Selye's. His approach notes that; "the judgement that a particular person-environment relationship is stressful hinges on cognitive appraisal". This interactional approach is concerned with how the individual interprets/perceives his environment (21:50; 49:153; 51:21).

Cox and Mackay also developed an interaction model of stress. his model describes stress as, "part of a complex and dynamic system of transactionbetween the person and his environment". The model consists of five stages.

Stage 1. Demand is either an external environmental factor or physiological/psychological needs which become internal demands.

Stage 2. Imbalance is the person's perception of both the demand and his ability to cope with it.

Stage 3. Psychophysiological Change is the response to stress. This response includes changes in emotional and physiological states and behavioural changes in attempt to mitigate demand.

Stage 4. Consequences of Response deals with the actual or perceived consequences of the response (anticipation of failure to meet demand).

Stage 5. Feedback occurs at all stages and shapes the outcome of each stage (19:18-21; 20:91-113).

The model (Figure 2.) depicts stress as an intervening variable between the person and his environment.

Another view of the concept of stress has been proposed by Lennart Levi, a noted researcher in this area. He indicates that psychosocial stimuli, combined with biological programming (adaptation pattern), are the basic determinants of psychological and physiological reactions and mechanisms (stress) (Fig. 3). This stress can lead to disease and can be either fostered or countered by interacting variables. These variables include habits, adaptive behavior, learning, coping, genetic and acquired interaction techniques (53:10,25; 56:128).

These perspectives cover the biological, cognitive, and environmental facets of the stress problem. There are a variety of ideas concerning the definition of stress. The definitions noted have in common the relationship between stress and the mental/physical well-being of the individual and the perception of stress as external/internal factors

making unusual demands on the individual which results in internal/external responses from the individual.

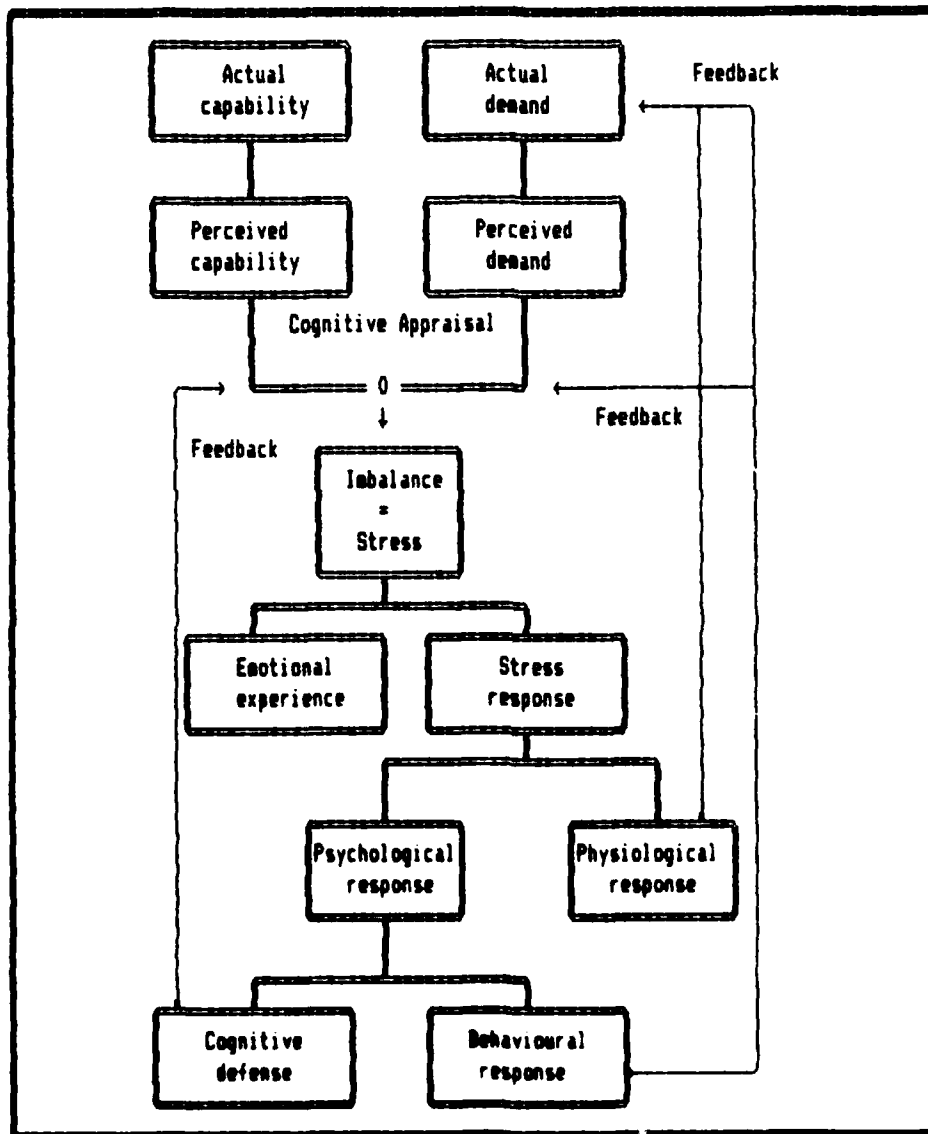


Figure 2. Transactional Model of Stress (adapted from 19:19).

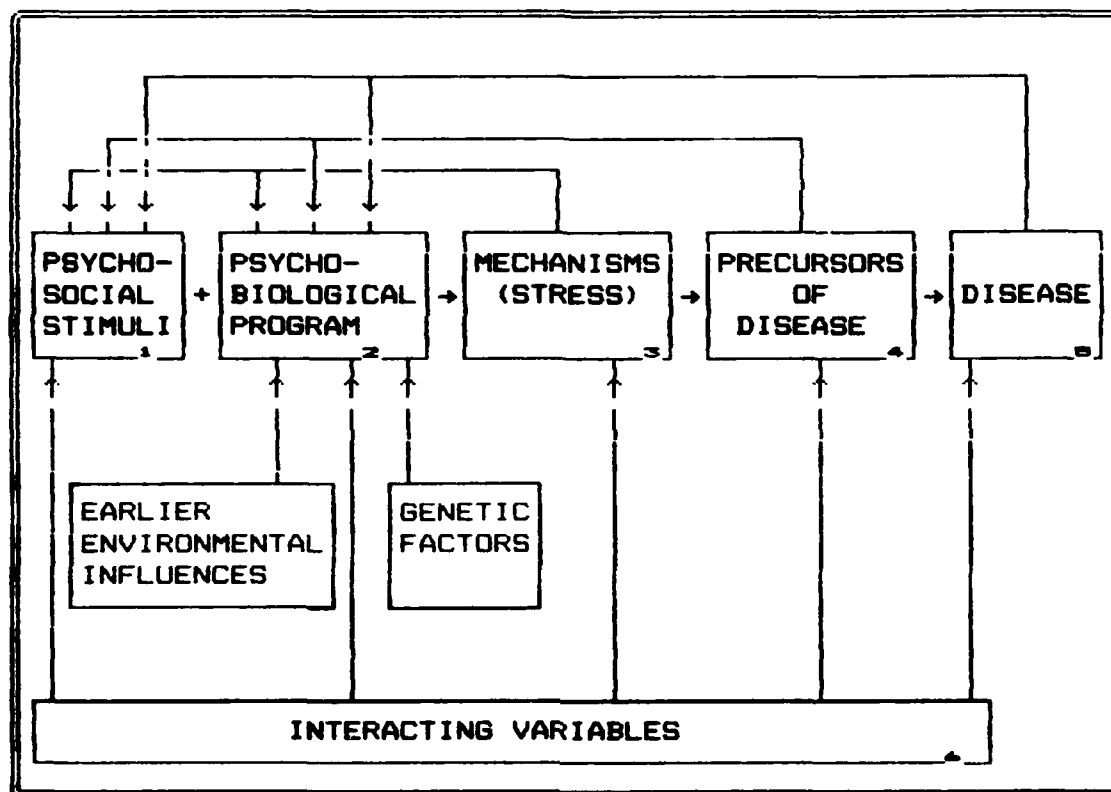


Figure 3. Psychosocial Stress Model (adapted from 53:10).

The manager must wade through a myriad of definitions and concepts before he can begin to deal with and understand stress. In order to successfully manage encountered stress, one must be able to recognize its presence or occurrence. Providing managers with the ability to recognize signs of stress is the objective of the next section.

### Stress Recognition

To fully understand the many signs of stress, we must consider both internal and external signs of stress. Internal signs are those which may or may not be detected by

the individual. External signs are those which are detectable, not only by the victim, but also by an outside observer. Much of the literature in this area is concerned with the basic physiological and psychological aspects of stress. In the total scheme of stress recognition, another important facet is recognition of possible causal and contributory factors in the formation of adverse stress situations and reactions thereto.

An event which causes stress for one person may not have that effect on another (1; 8; 70; 74; 75; 77; 81). Selye, in his pioneering work, related that all stress does not have negative connotations. We, as human beings, require a certain amount of stress in our lives. He related that stress can even have curative value (shock therapy, bloodletting, and sports) (75:3). It is worth remarking that exercise, such as jogging; produces reactions in the autonomic nervous system that are similar, and sometimes identical, in nature to those reactions that occur from unpleasant stressor situations (1:59). Selye illustrated the two sided nature of stress when he discussed the sensation of "being keyed up". He indicated that on the one hand, being keyed up allowed us to be better prepared for peak accomplishments; on the other hand, the tingling sensation and jitteryness we experience when we are too keyed up impairs our work and can even prevent us from sleeping (75:264-265). In a subsequent work, Stress Without

Distress (1974), Selye refined his argument and used the terms eustress to describe the positive beneficial state of stress and distress to describe the negative and counterproductive state (76:31).

The basic discussion of recognizing problem causing stress is involved with the body's "flight or fight response". Many researchers have related stress to the primitive reaction of our ancestors to threats to their security. Muscles tense, hormone output from the endocrine gland system increases (including massive outputs of adrenaline), the digestive process ceases, the pupils dilate, the muscles of the bladder and bowel become loose, quick energy is gained from release of stored sugar into the blood, oxygen supply increases due to increases in production of red blood cells and increased breathing rate, and the blood clotting mechanism is activated to provide minimal loss of blood in the event of injury. These are just a few of the physiological expressions of reaction to particular stressors or stress in general.

These reactions were repeatedly observed by researchers conducting various experiments in this area (19; 46; 47; 51; 53; 75; 80; 81). Selye, in his experiments, documented the changes that affected the visceral organs and other bodily systems of his experimental subjects.

The problem starts for modern man when the primitive fight or flight response cannot be released. It is not

acceptable behavior, in our society, to go out and murder the boss if you get an unsatisfactory evaluation that effectually ends any chance you have for further promotion. Neither is it acceptable to run away from challenges that might pose what you feel is an inordinate amount of stress. Behavior norms that prohibit modern man from using those responses to stress which would have been acceptable to his primitive ancestor only serve to amplify and aggravate modern stress situations (1:55-56; 45:10-11).

The Air Force manager must depend on his ability to readily recognize signs of adverse stress reactions. A common reaction to stress is headache. The contraction phase of the fight or flight response prepares the body for physical action. In today's social setting, such action does not often occur. Continued muscle tension with no release leads to headaches (74:75-76).

It is imperative to note that the various signs and symptoms of stress that have been identified may or may not appear in a person experiencing stress. Responses depend on the individual (see Figs. 1, 2 & 3). Additionally, it would appear that behavior styles/personality of the individual also impact the display of particular signs and symptoms of stress. Sehnert provides the following comprehensive list of internally or externally recognizable signs of stress reaction.

1. Decision making becomes difficult (both major and minor kinds).
2. Excessive daydreaming or fantasizing about "getting away from it all."
3. Increased use of cigarettes and/or alcohol.
4. Increased use of tranquilizers and "uppers".
5. Thoughts trail off while speaking or writing.
6. Excessive worrying about all things.
7. Sudden outbursts of temper and hostility.
8. Paranoid ideas and mistrust of friends and family.
9. Forgetfulness of appointments, deadlines, and dates.
10. Frequent spells of brooding and feeling of inadequacy.
11. Reversals in usual behavior. (74:74-75)

For the purpose of ready recognition, I submit that 2, 6, and 10 are the hardest to identify and items 4 and 8 are easily covered up.

Quick and Quick divided symptoms into three categories.

1. Behavioral: smoking, alcohol abuse, drug abuse, accident proneness, violence, and appetite disorders, etc.
2. Psychological: depression, family problems, sleep disturbances, sexual dysfunction, psychogenic disability, and burnout syndrome [a pattern of unavoidable exhaustion due to unsatisfied demands]
3. Medical: ulcers, hypertension, heart disease/stroke, backache/arthritis, headache, cancer, diabetes, and liver/lung/skin disease (70:44,56)

Cox and Bradley suggested linking the following list of psychological, behavioral, and health effects to stress.

1. Subjective Effects: anxiety, aggression, apathy, boredom, depression, fatigue, frustration, guilt and shame, irritability and bad temper, moodiness, low self esteem, threat and tension, nervousness, and loneliness.
2. Behavioral Effects: accident proneness, drug taking, emotional outbursts, excessive eating or loss of appetite, excessive drinking and smoking, excitability, impulsive behavior, impaired speech, nervous laughter, restlessness, and trembling.
3. Cognitive Effects: inability to make decisions and concentrate, frequent forgetfulness, hypersensitivity to criticism, and mental blocks.
4. Physiological Effects: increased blood and urine catecholamines and corticosteroids, increased blood glucose levels, increased heart rate and blood pressure, dryness of mouth, sweating, dilation of pupils, difficulty breathing, hot and cold spells, 'a lump in throat', and numbness and tingling in parts of limbs.
5. Health Effects: asthma, amenorrhea, chest and back pains, coronary heart disease, diarrhea, faintness and dizziness, dyspepsia, frequent urination, headaches and migraine, neuroses, nightmares, insomnia, psychoses, psychosomatic disorder, diabetes mellitus, skin rash, ulcers, loss of sexual interest, and weakness.
6. Organizational Effects: absenteeism, poor industrial relations, poor productivity, high accident and labor turnover rates, poor organizational climate, antagonism at work, and job dissatisfaction (19:91-92).

These examples provide a variety of physiological, psychological, and behavioral responses which characterize the presence of stress. Once the manager has learned to recognize the signs of stress, he can observe how work performance is affected. The appendix contains a comprehensive list of stress signs a worker may exhibit and some effects that stress may have on the organization.

From a holistic viewpoint; the manager is obligated to deal with employee stress, even though work performance is unaffected (1; 38; 58; 74; 92). However, the holistic perspective is not what we deal with on a routine basis. Managers usually attempt to deal with stress when that stress has manifested itself in the form of reduced worker productivity and effectiveness (crisis management). Often, concern is not so much for the employee as it is for how the employee's dysfunction affects the organization. Management action is usually of a punitive nature at this point, rather than preventative. Additional stress in the environment can result from such action.

It is important to remember that the military organization, unlike a civilian one, has responsibilities which relate directly to the defense posture and policy of the nation. This consideration places stress management in the Air Force on a level of high priority.

Regardless of the approach used, "stress in organizations is a managerial problem" (1:113). Once the manager has acknowledged that stress is a problem, he can begin to discover just what causes stress for himself and his workers.

#### Sources/Causes of Stress

The question concerning the causes/sources of stress uncovers an abundance of possibilities that vary from individual to individual. The causality of stress deals

with both actual and perceived events which necessitate our response or adaptation to the demands of such events.

Charlesworth and Nathan identified the following stressors.

1. Emotional Stressors: include the gamut of things that cause us anxiety and fear (worry about job, unpaid bills, or exams).
2. Family Stressors: concern interactions of family members and could include marital problems, adjustment to a newborn, or caring for aging parents.
3. Social Stressors: involves interactions with other people and include such considerations as dating, perceived or actual "place in society", or job position/status.
4. Change Stressors: concern limits on the amount of change humans can stand; and include technological change, change of job, change of relationship, and training (including stress management training).
5. Chemical Stressors: include drugs or alcohol taken in abusive quantities, chemical additives in our foods, and chemicals we breathe from the air or drink in our water.
6. Work Stressors: include tensions/pressures of the workplace such as shift work, impossible deadlines, inability to visualize contributions, difficulty in making decisions because there are too many alternatives from which to choose and too little time, inability to predict and control, role ambiguity and conflict, and limited capacity of humans to receive/process, and remember information.
7. Commuting Stressors: depend on distance from home to work, the amount of time spent driving in "rush-hour" traffic, or long bus or train commute.
8. Phobic Stressors: those exaggerated fears (certain animals, places, objects, or situations) which the individual knows, intellectually, pose no immediate danger; examples include fear of speaking in front of a crowd, acrophobia (fear of heights), and claustrophobia (fear of small enclosed spaces).

9. Physical Stressors: those demands that change the physiological state of our bodies. They include lack of sleep, poor diet, pregnancy, menstrual discomfort, and injury.
10. Disease Stressors: result from either long or short term disorders. Chronic diseases such as asthma, allergies, hypertension, ulcers, multiple sclerosis, and arthritis not only cause stress but can be intensified or aggravated in their effect by stress.
11. Pain Stressors: the aches and pains resulting from new and old accidents, injuries, or disease.
12. Environmental Stressors: environmental factors we cannot always avoid (temperature changes, over-crowded office space, loud machine noise, and for some, silence) (11:21-31).

This list is by no means exhaustive. Siegel and others found that there are various types of stress, categorized as either personal stress or unit stress, that affect the peacetime soldier. Personal stress included "self conflicts, family conflicts, economic worries, blocks to promotion and difficult schedules". Unit stress included adverse circumstances and situations within the unit (84:25).

For the military member, combat readiness is the aim of all training. In observing soldiers under simulated combat conditions, Siegel and others were able to determine some of the stressful aspects of combat. These include:

1. Uncertainty
2. Lack of confidence in leader's decision making
3. Poor information flow
4. Feelings of being out of control due to lack of information
5. Poor leadership

6. Replacement soldiers who are at first viewed as outsiders to the unit (84:29-32).

The Air Force is replete with examples of stressful duties. Missile Launch Crews or Alert Bomber Crews who are uncertain during a tour of duty as to whether or not they will be called upon to arm and launch their weapons systems due to a sudden declaration of hostility are stressed. Similarly, the Tanker Crews and crews of any aircraft they must refuel are placed in a stressful situation every time they link up. A mistake in this delicate operation could be fatal. Consider the adjustments necessary for stress on the Security Policeman who often works a six day week on a rotating shift divided into two day shifts, two swing shifts, and two midnight shifts.

The diversity of occupations adds more depth to the issue of sources/causes of stress. Support jobs in the Air Force can be just as stressful as operational ones. For example, the emergency room technician and the personnel specialist suffer adverse stress at times from working with either injured patients or dissatisfied customers respectively.

Table I provides a compilation of the twelve most and twelve least stressful occupations based on a National Institute for Occupational Safety and Health (NIOSH) survey of 130 occupations. The NIOSH study was compiled from data collected from death rates, hospital admissions and mental health center admissions (36:89). The results appear

somewhat inconclusive due to the fact that subjects of every category investigated displayed signs of stress related disorders.

High incidence of stress related disorders occur at all work levels. These disorders were found in skilled and unskilled workers, white-collar/blue-collar workers, and at upper/lower ends of the socioeconomic scale with little discrimination.

The most stressful occupation identified was laborer. Evidence suggests that skill level, job status, or social status does not provide exemption from the occurrence of distress. Additionally the study indicated that health care professionals, people with distressed clients, and shift workers displayed significant levels of stress related problems (34:35-36; 36:88-90; 58:79-80).

Stressful Life Events. One area of consideration examines stressful life events. These are the routine events of personal life and concern focuses on how they can be a source of stress. Nielsen and Tremaine, in their 1984 masters thesis, described a stressful life event as "a life event that functions as a stressor" (63:7).

Table I Occupational Stress (adapted from 36:88)

| Most Stressful Jobs (in order of decreasing stress)  |                          |
|--|--------------------------|
| 1.   | Laborer                  |
| 2.   | Secretary                |
| 3.   | Inspector                |
| 4.   | Clinical Lab Technician  |
| 5.   | Office Manager           |
| 6.   | Foreman                  |
| 7.   | Manager/Administrator    |
| 8.   | Waitress/Waiter          |
| 9.   | Machine Operator         |
| 10.  | Farm Owner               |
| 11.  | Miner                    |
| 12.  | Painter                  |
| Least Stressful Jobs (in order of increasing stress) |                          |
| 1.   | Clothing Sewer           |
| 2.   | Checker, Examiner        |
| 3.   | Stock Handler            |
| 4.   | Craft Worker             |
| 5.   | Maid                     |
| 6.   | Farm Laborer             |
| 7.   | Heavy-Equipment Operator |
| 8.   | Freight Handler          |
| 9.   | Child-Care Worker        |
| 10.  | Package Wrapper          |
| 11.  | College Professor        |
| 12.  | Personnel Worker         |

The concept of stressful life events centers on the reaction or adaptation of individuals to change in their personal lives. Charlesworth and Nathan wrote, "change of any sort can be scary and exciting, and it usually triggers our stress response" (12:38). Bhagat, in his research, proposed that a relationship exists between stressful life events and the cognitive appraisal and personality of the individual (6:662). As with other stressors, adaptation strategies for

the indicated stressor will be dependent on the individual's interpretation and valuing of the situation.

The following list consists of some intervening variables that could impact the individual's reaction to, or perception, of a stressful life event.

1. Age
2. Sex
3. Marital Status
4. Socioeconomic Status
5. Ethnicity
6. Education
7. Personality (63:9-12).

A weighted scale of stressful life events, the Schedule of Recent Life Experiences (SRE), was developed by Holmes and Rahe. The scale has been used extensively in much of the research conducted on stressful life events. This schedule (Table II) presents 43 life events and rank orders. Additionally, values are assigned to each event ranging from 100 for the highest stressor to 11 for the lowest stressor.

It was noted that 50% of subjects with a life events score between 150 and 300 reported an illness within the next year following the research. Seventy percent of subjects with scores over 300 reported illness during the following year (58:65-68). Bhagat believes that life events referenced in the SRE could be classified as either "negative (e.g., death of a loved one) or positive

(marriage, birth of a baby)" (6:662). Other researchers noted that some of the events in the SRE are rather neutral. Effect is tempered by the attitudes and perceptions of the individual experiencing the event. Individual proclivities, or capabilities for handling adverse stress also contribute to the effect (1:215; 60:191; 80:31).

Moss, in his discussion of stressful life events, identified five characteristics of stressors that affect individual response.

1. Intensity: Intensity refers to the rate of change; be it personal, societal, or organizational. Societal changes, in particular, are seen as the most significant contributors to unacceptable levels of stress.
2. Magnitude and duration: Magnitude involves the degree of deviation from the "norm" and can be a predictor of response. Duration concerns the amount of time the individual is exposed to a particular stressor.
3. Predictability and novelty: Predictability concerns the uncertainty of unplanned events. Inability to predict occurrence of stress serves to increase its negative consequences. The novelty of a situation can heighten its adverse effects. Prior exposure, through simulation, reduces the impact of novelty.
4. Timing and context: Multiple stressors occurring simultaneously have more devastating effects than those occurring singularly. If particularly stressful situations or conditions are anticipated, reworking a schedule or series of planned actions could minimize the effect of multiple stressors by separating them into manageable units.
5. Vulnerability to illness: Individuals tend to become more susceptible to various illnesses when faced with significant changes in their environment and recent life events (61:176-181).

Table II

Schedule of Recent Life Experiences (adapted from 58:67)

| Rank | Event                                 | Value |
|------|---------------------------------------|-------|
| 1    | Death of spouse                       | 100   |
| 2    | Divorce                               | 73    |
| 3    | Marital separation                    | 65    |
| 4    | Jail Term                             | 63    |
| 5    | Death of close family member          | 63    |
| 6    | Personal injury or illness            | 53    |
| 7    | Marriage                              | 50    |
| 8    | Fired from work                       | 47    |
| 9    | Marital reconciliation                | 45    |
| 10   | Retirement                            | 45    |
| 11   | Change in family member's health      | 44    |
| 12   | Pregnancy                             | 40    |
| 13   | Sex difficulties                      | 39    |
| 14   | Addition to family                    | 39    |
| 15   | Business readjustment                 | 39    |
| 16   | Change in financial status            | 38    |
| 17   | Death of close friend                 | 37    |
| 18   | Change to different line of work      | 36    |
| 19   | Change in number of marital arguments | 35    |
| 20   | Mortgage or loan over \$10,000        | 31    |
| 21   | Foreclosure of mortgage or loan       | 30    |
| 22   | Change in work responsibilities       | 29    |
| 23   | Son or daughter leaving home          | 29    |
| 24   | Trouble with in-laws                  | 29    |
| 25   | Outstanding personal achievement      | 28    |
| 26   | Spouse begins or stops work           | 26    |
| 27   | Starting or finishing school          | 26    |
| 28   | Change in living conditions           | 25    |
| 29   | Revision of personal habits           | 24    |
| 30   | Trouble with boss                     | 23    |
| 31   | Change in work hours, conditions      | 20    |
| 32   | Change in residence                   | 20    |
| 33   | Change in schools                     | 20    |
| 34   | Change in recreational habits         | 19    |
| 35   | Change in church activities           | 19    |
| 36   | Change in social activities           | 18    |
| 37   | Mortgage or loan under \$10,000       | 17    |
| 38   | Change in sleeping habits             | 16    |
| 39   | Change in number of family gatherings | 15    |
| 40   | Change in eating habits               | 15    |
| 41   | Vacation                              | 13    |
| 42   | Christmas season                      | 12    |
| 43   | Minor violation of the law            | 11    |

Quick and Quick acknowledged the value of the SRE as a diagnostic tool. However, they feel that it does not address organizational causes of stress in sufficient detail. Only seven of the 43 items in the SRE are directly related to work (70:123-125).

Organizational Causes of Stress. The manager's primary environment is the workplace. As such, it is imperative that he be aware of the factors which constitute stressors in the workplace. We spend a considerable portion of our day engaged in some type of work. Ganster and others asserted that stress at work is a critical factor in employee health and organizational effectiveness (31:533). Deficient employee performance, due to the effects of stress, represents significant costs to organizations. Selye believes that "stress is the spice of life" and, as such, is associated with every type of activity (76:85). If we accept Selye's contention, then it follows that there is stress associated with work.

In order to understand the stressors that can affect us in the workplace, we must first look at what work does for the individual. Warshaw proposed the following list of human needs that are satisfied by work.

1. Maintenance: provides economic and material goods that allow us to obtain essentials for survival.
2. Activity: provides purposeful physical/mental activity the human being requires.

3. Social needs: fulfills need for companionship and belonging.
4. Self-esteem: provides sense of identity, sense of worth, recognition of accomplishments, and rank/position.
5. Self-actualization: provides the opportunity for a feeling of confidence in the knowledge that you are recognized as the best at what you do (92:17-18).

Any obstacle to attainment of these needs in the organizational milieu is a potential stressor.

An understanding of the organizational causes of stress can be achieved by examining the organizational, task, and personal components of the workplace. Literature concerning stress supports the contention that the worker does not operate in a vacuum, but interacts with all aspects of the organizational environment. The worker can react either appropriately or inappropriately to internal and external stressors in the environment. The degree of stressor effect encountered is mitigated by the cognitive perceptions of the individual (1; 5; 8; 16; 34; 36; 45; 54; 55; 58; 70; 73; 79; 90; 92; 93).

Several stress producing factors appeared in one form or another throughout the literature. The prevalence of these factors warrant a separate treatment for each one. Under the headings; Organization Factors, Task Factors, and Personal Factors each of these will be examined as specific factors in workplace stress.

Organization Factors. Organizational stressors describe characteristics that are intrinsic to an organization. These include poor physical working conditions, work overload/underload, time pressure/deadlines, shiftwork, lack of support, frequent relocation, responsibility for people, and low promotion opportunity (1; 8; 16; 45; 54; 55; 58; 70; 92).

Physical conditions. Physical working conditions can be a major source of stress. Adverse environmental factors in the physical plant of the workplace can produce severe stress reactions after prolonged exposure to such situations (1; 8; 16; 45; 54; 55; 58; 70; 92). This section will focus on climate and temperature, lighting, noise, and workspace.

Climate/Temperature. Climate or temperature is mentioned most frequently as an adverse factor in the workplace (1; 8; 34; 45; 54; 55; 70; 80). Albrecht noted that the human temperature comfort zone lies between 65 and 80 degrees Fahrenheit (1:140). Ivancevich and Matteson observed that excessive heat and cold have both physiological and psychological effects. Excessive heat physiologically can increase blood flow, heart rate, oxygen intake and cause fatigue. Psychologically it disrupts normal function and increases irritability. Excessive cold results in lower energy levels and possibly reduces

motivation. It decreases performance of tasks requiring the use of the hands and feet. It was also noted that incidence of violent crime increases during periods of hot weather and subsides when temperatures drop (45:107).

Levi observed that the optimal level of humidity lies between 40 and 60 percent, while optimum air velocity is 0.2 meters per second (54:58). Humidity and air velocity that deviate from these norms increase the adverse effect of temperature. For example, in the winter we worry about the chill factor which varies according to wind speed and relative humidity. The overall stress producing capability of temperature and climatic conditions is dependent on the physical/mental state of the individual and the amount of physical effort needed to perform a task (54:58).

Lighting. The effects of lighting as a workplace stressor are manifested when there is too much or too little (poor) illumination for the task (45:105-106; 54:57; 70:32-33). It was often reported that glaring or flickering lights resulted in the discomfiture of headaches and muscle strain that reduced worker productivity (45:106; 54:57). Psychologically too much glare made the environment seem hostile, while minimal glare made it seem friendly (45:106; 70:32-33). Levi observed that poor lighting increases the risk of accidents (54:57). An individual concerned about his physical safety is not giving full attention to his job. This factor must be taken into

consideration by the manager when designing or defining work spaces. Every effort must be made to ensure that lighting is adequate to the task without being too much.

Noise. Prolonged exposure to stressful noise levels results in lowered tolerance for frustration, fatigue and decreased performance (45:107). Some examples of potentially stressful noise areas are; aircraft flightlines, construction sites, electrical powerplants and woodworking shops. The normal sounds of a busy street are sufficient to cause deafness in cases of prolonged exposure (8:84; 45:106).

Studies have shown that people are remarkably adaptable to different noise levels. However; the presence of excessive or intermittent noise (or both) disrupts concentration and leads to frustration, anger, and tension. It overrides the internal speech we use for thinking and masks the auditory feedback that helps control the performance of tasks (you can't hear yourself think) (8:84; 45:106; 54:54). A positive correlation was reported between noise and incidence of hypertension, heart disease, ulcers, and psychological complaints (54:54-55).

Workspace. Just as a stressor is perceived in different ways by different people so too, is allocated workspace and workspace design. Warshaw notes that the expansiveness of a large open office or the

confines of a small room can be individually stressful (92:20). The varied activity of the larger open space is distracting to some while the confinement of the smaller space produces unsettling feelings of solitude and isolation in others.

The physical layout of workspace can act as a barrier to communication, decrease cohesion/support by heightening stress and tension between employees, and adversely affect safety of the workplace (55:30; 70:34). Six desired characteristics of physical layouts are listed below.

1. provide shelter and security
2. facilitate social contact
3. provide symbolic identification
4. enhance task instrumentality
5. heighten pleasure
6. stimulate growth (70:34).

A balanced workspace is not a luxury. It is necessary to maintain a productive environment. Overcrowding has been associated with high levels of stress due to the perception, by the stressed person, that he is being inhibited by crowding (34:74). This sentiment is often expressed as "you're invading my space".

Overload/Underload. Work overload and work underload have both physical and psychological parameters that determine their existence and can lead to adverse stress reactions (19:157-158).

Overload can be viewed from both a quantitative and qualitative standpoint. In its quantitative (physical)

aspect, it deals with the perception that there is too much work to do and too little time in which to do it (34:19; 36:25; 45:113; 92:20-21). Some symptoms of this condition include: alcohol abuse, absenteeism , and a lowered sense of self worth (36:19). Work overload stress symptoms may be manifested by a person holding down two jobs, working overtime, or attempting to meet unrealistic deadlines.

Qualitative (psychological) overload is concerned with a perception of an improper match of skills to tasks. The individual experiencing qualitative overload perceives that he does not possess the abilities needed for the job, performance standards are too high, and that no amount of time is sufficient to complete assigned tasks (45:113).

Regardless of distinction, overload should be of vital concern to management. Reduced performance, increased illness, absenteeism, levels of stress, and death have been repeatedly associated with overload (34:25; 36:19; 45:113).

Underload is the reversed condition of overload. Suprisingly it has many of the same consequences. The underload factor manifests itself quantitatively when a worker is faced with "time on his hands" due to lack of an adequate amount of work (1:140; 34:25). Qualitatively, underload results when the worker feels that the job has insufficient challenges in relation to his education, training, skills, and abilities (34:25). Selye terms this condition "deprivational stress" (5:3).

"Without stimulation the body and brain simply do not function normally" (34:25). Symptoms of underload include anxiety, depression, frustration, indigestion, alcoholism, overeating, fatigue, impaired judgement and reasoning ability, and a sense of loss of worth or prestige (1:140; 34:25). These symptoms of underload can result in lowered performance and present such hidden costs to the organization as the hiring of new people to fill in the gap in production created by dysfunctional workers. Beech and others indicated that, as a consequence of underload, employees produce at minimal rates on the job and compensate for this by vigorously pursuing extra-curricular activities (5:3).

The similarities in the symptoms of overload and underload illustrate that too little stress in the way of job expectations can be just as stressful to the worker and the organization as too much.

Time Pressure. Warshaw observed that "time pressure is one of the most prevalent stressors in the work setting" (92:185). Schmidt described time pressure as the need to get things done quickly and having to do several things at the same time. Recognition of time pressure is important. The stress caused by long hours and deadlines erode freedom and physically drive our actions (72:5-6).

The time stress problem is a culturally acquired one for Americans (34:44). Americans speak about time in such

terms as gaining and losing and are hard pressed if clocks are not available at home, school, office, and even in the car. This cultural preoccupation with time has resulted in transferring a sense of time urgency to the workplace. Deadlines and tight schedules imposed by either the manager or the worker himself lead to cases of chronic time overload in which the individual feels constantly trapped and behind schedule. The end result of this, all too often; is anxiety, depression, psychosomatic illness, and heart attacks (34:44-47).

Shiftwork. Shiftwork, work performed outside the hours of the normal day shift, is viewed by many stress researchers as a major cause of organizational and collateral stress (8; 43; 45; 54; 55; 58). Collateral stress is any stress from a particular source (work) that causes stress in another aspect of a person's life (family life). Modern industrial practices for capitalizing on expensive industrial assets, coupled with rapidly changing and complex technologies, have been the prime movers in the advent and propagation of shiftwork (8:72; 45:137; 54:42; 55:24; 92:131).

Shiftwork causes severe disturbances in the circadian rhythms ("biological clocks") of our bodies (8:74; 45:137; 54:41; 55:24; 92:132-134;). These disturbances often lead to aberrations in the body's temperature, endocrine, cardiovascular, respiratory, and autonomic nervous systems (8:74).

Largely due to biological predisposition and societal design, most human beings have a pronounced day-night orientation that focuses energy and activity at higher daytime levels versus nighttime levels (45:136-137;92:134). The disruption of this biological and societal norm causes stress. Shiftwork is realized as a stressor by workers who are unable to adjust to sleeping in the daytime. These individuals may suffer digestive ailments and social upheavals in family life (55:6-27). Table III illustrates some of the signs, symptoms and consequences of shiftwork stress.

Since humans are predominantly "day people", the shift worker is at a disadvantage because he is unable to interact socially with community and family. Being able to see his family in a more normal setting on weekends is usually of little or no help since the shift worker has to temporarily adjust to his family's/community's norms and violate his own adaptive programming.

Shiftwork stress, as any stress, is a function of change and adaption. A shift worker unable to adapt to the stress of his work pattern is at a greater risk of accident, lower productivity/commitment to the job, as well as psychological and physiological damage (8:74; 45:137-138).

Table III

Shiftwork Stress: Signs Symptoms and Consequences

(adapted from 8:74)

PHYSIOLOGICAL SYMPTOMS

Inability to get enough sleep

Fatigue

Disturbances in appetite, digestion, and elimination

Upper gastrointestinal disorders

Respiratory problems

DISTURBANCES IN FAMILY AND INTERPERSONAL RELATIONSHIPS

Parenting role difficulties

Higher divorce rate

Higher incidence of sexual problems

Unfavorable family reactions

Increase in solitary leisure activities

Less interest in social, religious, & civic organizations

Fewer contacts with friends

WORK PRODUCTIVITY

More mistakes

More accidents

Lower productivity

PSYCHOLOGICAL REACTIONS

Impaired mental health

Fewer needs fulfilled at work

Lower commitment to the organization

People who fly frequently are familiar with "jet lag" which is similarly disruptive to the normal functions of its victims (92:133). Jet lag could have serious consequences for the readiness of combat and transport aircrews, as well as our engineers and contracting personnel who travel frequently to conduct business associated with their jobs.

Results of several studies investigating the different types of shift configurations that are used have indicated

that workers who regularly rotate through day shift, swing or (evening) shift and night (grave) shift during their work week report greater incidences of stress as a result of their schedules. These individuals subsequently suffer greater job and family life dysfunction (8:73-74; 54:42).

Organizations with a two shift operation seemed to have less stress associated with them than those with a three shift operation (54:42). These findings could be of enormous benefit to senior management and the first line supervisor in the operation, design, and structure of their respective organizational environments in order to successfully reduce or eliminate the shiftwork stressor. Just as with other stressors, the effects of shiftwork stress are tempered by the capability of the individual to adapt to that particular stressor.

Lack of Support. Inadequate support by superiors is an important factor that produces stress in workers so affected (72:5). A perceived lack of support can cause collateral stress due to its negative effects on the workers estimation of his worth and place in the organization (70:30-31). The support of management can go a long way toward mitigating the other stressors in the workplace (58:94).

Frequent Moves. Frequent moves are a particularly important and ever-present, stressor in the

military environment. Adjusting to a new base involves many changes. An individual's job, social life, community involvement, and family life style change with each move. These kinds of changes associated with a move can be stimulating, but require the expenditure of adaptive energy which causes stress (5:6).

The Air Force manager must consider this from two standpoints. On the personal level, the manager himself is likely to relocate several times in a career. At an organizational level, personnel resources under his control move into and out of his organization. Moves are a fact of life that the manager really cannot control. However, he can be aware of the potential stress of this factor and take appropriate steps to reduce other stressors over which he has some control.

Responsibility for People. We look to our managers to lead and guide us in our accomplishment of assigned tasks. We do not, as a rule, consider that their job responsibilities can be stressful. Supervisory responsibility as a source of job stress came up frequently in the literature on the organizational causes of stress (8:80-81; 19:167; 36:19; 16:15; 58:85-86).

Managers have responsibility for equipment, buildings, projects and reports. These responsibilities may involve stress reactions due to imposed deadlines and suspenses. These reactions, however, are not as severe as those

resulting from the manager's exercise of responsibility for the people he supervises (45:114). A stressed manager is more apt to be a source of worker stress.

Managers with responsibility for people in their organizations are more likely to display incidences of heavy alcohol and tobacco use, high levels of cholesterol, and high blood pressure (16:15; 45:115).

Promotion Opportunity. Being promoted in a job enhances ones perception of self-worth as well as the esteem and respect earned from one's peers and subordinates. Conversely, a worker in a job where there is little or no opportunity for advancement is denied these things and is subsequently distressed.

The perception (or reality) of the "dead end" job is sufficient to cause frustration, anxiety, and stress for the person so affected (45:115). McLean noted that reactions of individuals in jobs with low promotion opportunity ranged from "minor psychological symptoms and psychosomatic complaints to more serious mental disorder" (58:84).

Dissatisfaction with the job is one response to the lack of promotion opportunity (45:116). This can lead to rapid disenchantment with organizational objectives and, eventually, to termination of the individual's relationship with the organization. The manager should be aware of this potential response. In the military, promotion is not a local responsibility. Every worker should be given

opportunities to "excel" in his current position. An alert manager can provide these opportunities.

Task Factors. Several stressors are associated with some factors intrinsic to required tasks. The literature indicates that stress is often caused by such factors as assembly line operations, piecework, and technology (36:20; 45:132-133; 58:81-82; 92:21-22).

Assembly Lines and Piecework. Assembly line operations have several intrinsic factors that pose stress adaptation problems for workers in that milieu. These tasks do not always involve expenditure of physical energy but are often characterized by repetitive operations, lack of intellectual stimulation, monotony and boredom, lack of opportunity for social interaction, time pressures, regimentation and rigid discipline, and simultaneous and conflicting exposure to the problems of overload and underload previously discussed (92:21-22).

Another significant finding in this area is that employees in this environment suffered considerable distress because they have so little control over the conduct of operations (45:131). Some symptoms of stress noted in this type of work include inability to relax, high absentee rates, and a high rate of psychosomatic disorders (54:50).

Workers who are paid based on achieving a set quota or unit production goal report many stress related problems.

Piecework is usually associated with repetitive task whereby the worker earns a stipend for each unit produced and possibly bonus amounts for percentages of units produced over the established quota (54:44-45; 58:80-81).

Stress in this area accrues from time pressure and overload which leads to increased incidence of accidents and health problems as a direct result of driving the body beyond acceptable limits in order to meet internalized external demands (54:43-48). A good Air Force example is the additional demands placed on aircraft maintenance personnel. During surge periods they are expected to generate aircraft sorties at wartime rates that may require production at one to one and a half times the normal rate. Another example is the serving line in the dining hall. It has intrinsic features that provide time pressure and uncontrollable demand.

Technology. Technology appears to be a both a blessing and a curse. Technological advances have, in many industries, lessened the amount of physical work that humans perform. This has not been done without a price. Levi noted that reduction of physical work exacts a toll of increased mental work and decreased human need satisfaction (54:22).

Organizations with high technology operations and processes tend to be either mechanistic or organic in structure. The mechanistic structure is characterized by

formal rules and hierarchies, supervision of large groups of low-skilled workers by first line supervisors, poor interpersonal relationships and intra-organizational conflict, and lack of decision making input. Organic structures are characterized by highly skilled workers with minimal supervisory requirements in an atmosphere that deemphasizes formal rules and encourages employees' interpersonal relations and participation in decision making (8:72). Many Air Force operations are based on highly technologically oriented processes.

Technology induced stress usually manifests itself in emotional stress, cardiovascular problems, gastrointestinal disorders, increase use of medications and increased allergy and respiratory problems (97:154). These symptoms, depending on their severity, tend to increase absenteeism and thereby subsequently decrease productivity.

Personal Factors. Individual stressors account for more organizational stress than any other stressor (45:110). An individual is the sum total of his experiences, perceptions, and capabilities. As noted previously, stress reactions depend a great deal on the individual. Therefore, these attributes are an important part of how an individual adapts to conditions in the work environment. Of the several factors identified in the literature; individual personality, role conflict, role ambiguity, and person-environment fit were selected for

inclusion due to their preeminence. A manager must consider these dimensions of his workers when making work assignments and structuring the task environment. Our jobs occupy a large part of our daily lives. The manager is primarily interested in performance on the job. Therefore, discussion of the personal factors that cause stress within the organizational context is warranted.

Individual Personality. There is a general consensus among stress researchers that human personality type is a major factor in the formation of stress disorders (5; 6; 8; 16; 19; 24; 34; 42; 45; 46; 54; 63; 68; 70; 80; 85; 87). Much of the research on the stress prone personality has centered on the stress/personality link to the contraction of coronary heart disease (CHD). The interaction of the stress prone person and stressors in his environment is what precipitates the problem (70:65). Differences in personality coupled with other environmental variables determine the outcome of a stress encounter.

Research findings have identified three distinct personality profiles and their relative resistance, or susceptibility, to stress related dysfunction. These are the Type A, Type B, and Type E personalities.

Type A. The Type A behavior pattern is exemplified predominantly by a high degree of competitiveness, workaholism, and time urgency (5; 8; 24; 34; 45; 58; 70; 71; 80). A more detailed list of Type A

characteristics appear in Table IV. The person exhibiting the Type A personality and behavior pattern is described as "hard-driving, aggressive, hostile, critical and very demanding" (80:207). The exhibition of any one of the characteristics could signal the onset of stress related disorder.

Table IV

Type A Characteristics (adapted from 81:206-207)

1. Intense time urgency and impatience
2. Strongly competitive must get ahead at all costs
3. Easily angered readily places blame on others
4. Cannot relax feels guilty if idle
5. Sets unrealistic deadlines for self
6. Values self based on quantity of accomplishments
7. Desires approval of superiors, not peers
8. Very materialistic possessions = esteem

The Type A personality tends to create significant amounts of stress for himself and, subsequently, for those with whom he comes in contact. He sets difficult goals for himself and others and is easily frustrated when desired results do not materialize (8:69). This type of personality is obsessed with a constant need to excel. He must earn status and rewards in order to show everyone how good he is at his job. (24:42; 45:181; 48:148-149; 58:69). The extremely competitive nature of the Type A worker causes him to constantly seek situations in which he is required to juggle several tasks or projects at one time. This driving

force acts as a stressor. The frustration experienced should he fail to achieve his goals (self-imposed or externally set) create even greater stress.

Physiologically; the stressors experienced by the Type A personality tend to make him more susceptible to risks of CHD, high levels of cholesterol in the blood, high blood pressure, and a higher than usual resting pulse rate (13:24; 58:69; 70:65; 71:263).

Cognitively and behaviorally; the Type A person tends to be a perfectionist, have a high level of ambition, exhibit little patience, be intolerant of mistakes, speak rapidly and loudly, gesture violently, grimace and scowl frequently, take little or no exercise, to be unable relax, bury insecurities (often clearly visible to others), and never appears to be satisfied with his lot (8:86; 24:44; 45:183; 54:80; 80:211). These attributes and characteristics should be considered when placing a Type A person in the organization.

All Type A behaviors are not negatively connotative. Some aspects, like drive and ambition, are actually desirable in and of themselves. However, it is how the individual handles the stress resulting from his personality typology that makes a difference in his job performance.

From an organizational viewpoint, the positions in which the Type A person can be a problem are personnel

supervision, competitive work (sales or piecework), heavy workload, and conflicting requirements (8:87).

Type B. The Type B personality is the opposite of the Type A. Type B individuals tend to be less harried, less competitive, flexible, less time dependent, and not as obsessed with status and materialistic standards (8:86; 24:44-45; 70:65; 80:211).

As a consequence of their different overall approach to life, the Type B person is at a considerably lower risk of CHD and the dysfunctional problems that accrue from largely self-inflicted stress. Type B's are less likely than Type A's to cause unnecessary stress to their colleagues and subordinates. They usually exhibit a pleasant facial expression, speak softly, have a moderate to slow walking pace, and are internally driven. They seldom grimace or gesture to make a point. They experience lower blood pressure and blood cholesterol levels than Type A's (24:46-47; 70:65; 80:211).

An important aspect of the discussion on personality type is the evidence that the complete Type A and Type B personalities can be viewed as opposite extremes of a continuum (58:70). Studies have shown that some Type B persons have contracted CHD and other Type A problems while some Type A persons display physiological patterns that are close to that of their Type B counterparts (58:69-71).

It is, therefore, possible that an individual can move back and forth along the personality continuum. Those that maintain the more Type B orientation should be considerably more successful at dealing with stress than those who favor the Type A orientation. The personality stress dimension, as with any other, can be mitigated by the combination of other factors in the individual's environment.

Type E. Harriet Braiker, a practicing clinical psychologist and researcher, has added a corollary to personality typology's relationship to stress. Braiker has identified the Type E stress personality. Similar to the Type A, this personality is exhibited by women experiencing conflict in attempting to satisfy both career objectives and family/community/societal ones (7:120). In Braiker's view, the stress related to the Type E personality appears in women who attempt to be "super everything". This stress takes its toll on the mental and physical health of these women just as the Type A stress does on their male counterparts.

Women are an ever-increasing and vital part of the workforce. Therefore, managers must become aware of the existence of this particular phenomenon.

Role Conflict. Role conflict was often indicated in the literature as a potential and actual stressor (5; 7; 8; 16; 19; 36; 38; 45; 54; 61; 70; 72; 80).

Role can be described as the "combination of the expectations and demands an employee places on himself or herself and those of other members of the organization" (45:110). Role conflict can usually be traced to employees who perform either boundary spanning tasks (sales/purchase agents, research and development scientist) or have supervisory responsibility for others (8:80-81).

The stressors arising from role conflicts are due largely to perceived discrepancies between personal role expectations and those of the organization and others. Conflicting demands, such as family time being impinged by job time and vice versa can also precipitate role conflict stress (8:79-81; 15:252; 45:110-111). Brief, Schuler and Van Sell, describe role conflict as incongruent expectations associated with a given role (8:79). A connection was made that supported the contention that the greater the power of the person or persons in the organization that contribute to, or are the cause, of the role conflict; the greater the stress that results (45:111).

Research has linked role conflict stressors physiologically to heart disease, hypertension, high cholesterol levels, and overweight conditions. Emotionally and behaviorally they are linked to increased anxiety and job dissatisfaction.

Role Ambiguity. Role ambiguity can be described as the extent to which necessary information is

lacking about the expectations of a role, ways of fulfilling role expectations, and the consequences of performance (8:81; 45:111-112; 70:30-31). Environments exhibiting role ambiguity have a gap between needed and available information required to effectively perform assigned tasks.

Stress arising from this condition is a direct result of uncertainty generated in the environment (70:30-31). This uncertainty can be attributed to role senders (those who determine the role). Providing vague, inadequate, and confusing information contribute to feelings of role ambiguity. The individual's uncertainty about which behaviors will elicit desired role responses and unclear consequences (unknown rewards or punishments for success or failure to fulfill role expectations) are also contributors.

Workers have different capacities for dealing with role ambiguity. Infrequent or short-term ambiguity is handled successfully by most people. Chronic ambiguity, however, has been shown to cause dysfunctional stress responses (45:112). This dysfunction is usually manifested by depression, lower job/life satisfaction, anxiety, high blood pressure, lower work motivation, and a general maladaptive malaise (45:112).

Person-Environment Fit. The Person-Environment Fit (PE) dimension of organizational stress is concerned with how well the worker's skills and attitudes approximate those required by the job and how well the job

or task environment approximates the requirements of the worker (19:168; 22:290; 42:146; 70:78-79).

The expression "the right tool for the job" exemplifies the desired relationship between work environment and the individual. PE dysfunction may lead to adverse consequences for both the individual and the organization. This can cause frustration for the employee whose skills and talents are being underutilized as well as lowered production for the organization whose requirements are not being met.

Changes in the job environment and the individual can affect existing PE deficiencies or create new ones (22:291). An example of this is a situation in which an older employee is not physically able to keep up with an increased tasking that would have been insignificant in his youth. Often the result of such situations is lower productivity for the organization and employee dissatisfaction.

Some of the symptoms of PE discrepancies are job dissatisfaction, somatic complaints, actual illnesses, anxiety, depression, and hypertension (9:168; 22:146).

Summary. There is a myriad of environmental factors that can be potential or actual stressors. These factors do not operate in a vacuum. Therefore, the presence of one factor may precipitate or aggravate the severity of the effect of another.

Reactions to stress can be viewed as the individual's response to the different dimensions of the various

stressors in his environment. Individual responses may be similar but vastly different based on individual capacity to adapt to or handle stressors.

Managers should be aware of these factors and the individual nature and degree of response. With awareness and an educated ability to deal with the situation, the manager can successfully maintain equilibrium in the workplace. The recognizability of organizational factors and methodologies to effect their correction, will be discussed in the section dealing with management action to alleviate stress. This area will be addressed in the handbook (appendix).

#### How Does Stress Affect Work Performance?

The Air Force manager is concerned with some sort of production or service activity. Varying reactions of employees to stressors or stress producing situations can affect employee performance. Adverse stress reactions will degrade productive activity in the organization (2:5-6; 22:145; 34:20; 39:160; 54:75; 90:130).

Absenteeism is "generally recognized as a major cause of lost productivity, sick absence (i.e. absence due to sickness) is one of the primary indicators of stress within an organization" (92:121). The absentee problem is a direct contributor to the rising costs of corporate medical insurance (92:123). Company requirements to have "sick" employees visit physicians can severely tax the company in

the form of increased health program costs. Control in this area is vital because of the apparent causal relationship between stress and absenteeism (47:60; 65:82; 92:124-125).

An ominous problem caused by absenteeism is manifested when employees are either absent from work or producing at substandard levels. If an employee is not at work, he cannot perform. Low productivity may also be manifested by persons who remain on the job. This can take the form of "active behaviors (e.g. grievances, go-slows, strikes, turnover, reluctance to take on certain jobs)" or "passive behaviors (e.g., resignation, low motivation, indifference to product quality, and absenteeism)" (54:75). In the military we see the appearance of the "goldbrick", a general shirker of responsibility who finds any excuse to be off the job.

Another stress related occurrence which affects the organization by lowering performance is accidents. A worker whose mind is distracted by stress, experiences diminished safety awareness. According to Clyde Smith, "those who feel great stress or tension are more irritable, show greater signs of physical and mental fatigue, are less objective, and seem more prone to make mistakes" (85:13).

In discussing reward systems, such as piecework wages, Levi indicated that stress created by the desire to increase rewards may force the employee to take unnecessary risks and ignore safety considerations. This increases the risk of

accidents (54:44). Warshaw stated, "a person under stress is an accident about to happen" (92:193).

Absenteeism and accidents in the workplace related to stress situations are observable phenomena. These have an adverse affect on the individual and on organizational productivity. When the organization suffers, the manager must take action to rectify the situation. Firing the distressed individual would solve the immediate problem. However, this action would place other employees in stressful situations by creating an insecure employment environment and increasing workload stress on those remaining. This action could also rob the organization of an otherwise valuable resource. A manager, aware of symptoms of stress and methods of dealing with stressors, could be in an excellent position to protect and fully utilize personnel resources.

#### How Can the Manager Alleviate Stress in the Workplace?

Learning the skills necessary to reduce or eliminate workplace stressors through employment of stress management strategies could be useful to the Air Force manager. Previous discussion explored the many different facets of stress. This section will address those stressors specific to the workplace and how the manager can best manage them to the benefit of his workers and the organization. The initial background of this section will be devoted to a

general sampling of the approaches to stress management as contained in the literature.

A manager's environment is the workplace. Therefore discussion is largely confined to the workplace. There are other major areas in an individual's life that can present varying degrees of stressor activity and reactions to them. However, these are outside the manager's scope and ability to control. The ability to intervene to alleviate potential or actual stress arising from other than workplace sources is somewhat greater for the Air Force manager than his civilian counterpart.

Background. The literature presented a wide variety of methods by which the stresses of life might be effectively managed or eliminated. Approaches to the issue varied. They tended to be rooted in the particular background of the researcher or writer, (medical, psychological, sociological, clinical, business, behavioral) or representative of a specific occupational specialty. The rest of this section will provide an overview of available techniques and specific approaches to the stressor variables identified previously under occupational sources of stress.

Keith Sehnert, a physician, looked at stress management from both a medical and spiritual perspective. Although his recommendations are directed at the individual level, they can be applied by the manager on both an individual and group basis. This is particularly practical when you

consider the manager's responsibility for control in the workplace.

Sehnert's stress management strategy is to:

1. Change work and social environments.
2. Learn to understand your emotions.
3. Learn remedies to relieve stress.
4. Take care of your body.
5. Provide for your spiritual needs (74:81-84).

Quick and Quick, in looking at preventive management of stress from both a medical and management perspective, indicated that "management has a responsibility for individual and organizational health" (70:148). This point places the burden of maintaining a healthy organizational atmosphere squarely on the shoulders of the manager. The Quicks also asserted that managers have a responsibility to attempt to prevent stress on the individual worker and the organization (70:149). Considering the interdependence of the individual and the organization, the manager would have to involve himself in the following four activities as a means of preventing or relaxing job stress. These activities are:

1. Role analysis or clarification of worker roles.
2. Goal-setting, focus on relationships between the worker and his immediate supervisor.
3. Social support, focusing on reducing psychosocial impacts of stress.
4. Team-building, focusing on the resolution of interpersonal conflict (6;25;70).

Environmental stressors are another dimension which can be addressed by the manager. The issue of "imperfect working conditions" was rated third in importance as a work problem in the 1972-1973 Institute for Social Research (ISR) national survey (83:24). Physical discomfort and indifference to worker comfort were two factors seen as within management's control and responsibility in preventing or resolving stress (83:24-25).

Much of the literature recognized a need for support and positive action by management in diminishing stress in the workplace (1; 25; 26; 34; 51; 54; 65; 70; 80; 94). The manager can promote a healthy atmosphere by including methods of stress management in his management techniques. He can encourage workers to learn to manage personal perceptions of stress and stressors in the work environment. Relaxation techniques, physical activities (like exercise), and referral to stress management professionals should be viewed as acceptable and desirable in the workplace.

The arsenal of generally recommended stress coping approaches included the following:

1. Medical therapy
2. Group therapy
3. Exercise
4. Dietary control
5. Meditation and relaxation
6. Biofeedback

7. Observing workers' reaction to stressors

8. Recreational activity

9. Counseling (1; 8; 10; 32; 35; 45; 54; 59; 70; 92).

Warshaw concluded his recommendations with a caveat that anyone attempting to institute stress management approaches should receive proper training in their administration. Without proper training, more stress could result from a perception by workers that management's concern is not genuine (92:176-178).

Many of the stress reduction strategies indicated require the involvement of trained practitioners or clinicians in order to be successfully established and maintained. This can be a costly option. Because of its cost in time and money, it is not often possible to institute.

For purposes of this study, techniques and strategies recommended for use of the manager in the work setting will be limited to those he can employ by acquiring additional training and skills that will not take him out of the workplace for long periods of time. The methods employed will be directed specifically at those organizational stressors seen as most important and in the immediate range of the capabilities and resources of the average manager.

Methods available for the alleviating adverse stress in the workplace are as varied as the signs which manifest the problem. The strategies mentioned address prevention,

management, and coping with stress. For the manager faced with adverse stressors in the environment, either on himself or his workers, there is no single cure or "cookbook solution". Therefore, as Purington suggests, "a combination of approaches need to be established to help people and organizations effectively deal with stress within the work force" (68:29). A manager able to use these stratagems, either singly or in combination, can effectively reduce or eliminate stress in the organizational environment.

Active Stress Management. Workplace stressors are within the manager's sphere of responsibility. Earlier discussion on this issue was segmented into physical, task, and personal stressor elements. That format will be used to match suggested stress management strategies to each individual stressor within its respective category.

Organizational Stressors. The manager is normally in an advantageous position to evaluate and remedy organizational stressors when necessary. In the course of monitoring the conduct of his operation, he may be exposed to the same stressors that are routinely affecting his workers.

The manager can usually exercise direct stress management control over physical conditions of the workplace, work overload/underload, time pressures, shiftwork, lack of support, and responsibility for people.

He may find that frequent relocation, and low promotion opportunity stressors are sometimes beyond his capability to control. Overall Air Force requirements and Congressional force ceilings play the major role in deciding duty station assignments and promotion opportunities respectively.

Physical conditions include climate/temperature, lighting, noise, and workspace. While these may not appear to be important, earlier indicated they can be a major source of organizational stress.

In attempting to alleviate the physical stressors, the manager must first determine the physical circumstances of the job (1:160). To do that; he must ascertain physical location, risks, influences, and constraints that affect the job. Once this is done, he can begin to tackle the problems posed by physical stressors.

One approach is to alter the offending environment (45:214-215). For example; the manager can install proper lighting to reduce glare, insulate or baffle to reduce noise, install adequate climatic control systems, or modify/redesign workspace to eliminate crowding. This presents a worst case scenario approach which can be costly and time consuming.

Providing protection from the adverse stressors is another more expedient approach. This could be as simple as providing ear defenders and tinted glasses to reduce noise and glare in the workspace (45:214). Removing the worker

from the environment by providing more frequent but shorter breaks and modifying dress requirements could also alleviate physical stressor conditions (45:215).

Often physical conditions are mandated by federal regulations (8:164). Therefore, the conscientious manager who regularly monitors and ensures that prescribed federal standards are maintained is actively preventing the formation of physical stress. This monitoring process could include questioning employees to determine satisfaction with arrangements, visits to medical activities to determine whether or not medical problems of employees are being precipitated by deficiencies in the physical condition of the workplace, or reviewing absentee records to determine any adverse trends traceable to physical stressors (8:164; 70:181,183). This process will give the manager a current assessment as to the state of physical stressors in his area.

When faced with overload/underload stressors the manager has several alternatives that can successfully mitigate the situation. Instituting systems whereby work is shared with, or delegated to, other workers and providing training that improves individual worker efficiency can significantly decrease overload stress (34:289). Workers in this environment perceive that their needs and requirements are met and supported by management. This recognition of needs helps workers feel like part of a team.

The use of either frequent short breaks (5 minute) for work that requires heavy concentration or less frequent, but longer ones (10 minute) for work that requires constant physical exertion will reduce the chance of fatigue and maintain optimal performance levels (54:106-107). Break areas should be designed such that they are not reminders of the normal work station environment.

Another method of dealing with overload is the establishment of a flexi-time policy which allows the employee to work at hours that are convenient to him and still maintain management's production goals. Employees must schedule flexible time around core hours that are established as minimum times that the employee must be at work (34:289; 92:185). Flexi-time is seen as a positive step in stress management because it provides workers with a certain amount of autonomy and control of their work lives.

Increased productivity, decreased absenteeism, and commitment to the organization is fostered by relieving overload stress (34:289).

The manager can eliminate underload stress by conscientiously ensuring that workers are assigned tasks that as much as possible, challenges their skills and training (34:25). This is especially important in jobs which are viewed as monotonous, repetitive, or boring. To ease underload stress in these jobs the manager must consider approaches that take the worker out of normal task

routines and rotate him through different tasks. Assembly lines are classic examples of this particular stressor. A great deal of success has been achieved in plants that use a rotation approach that restructures and enriches an otherwise "dead-end" job (92:182-183).

The stressor activity associated with time pressure can be positively influenced by the intervention of the manager. By carefully planning schedules so that maximum efficient use of available time is achieved, the manager can reduce and (perhaps eliminate) the time stress problem (34:53). This provides a twofold benefit. A manager able to effectively schedule his own time, can reduce the possibility of causing time stress problems for his employees by effectively planning job time requirements.

A key way to provide relative freedom from time stressors is for the manager to encourage his workers to be aware of their duties, responsibilities, authority, and the importance of their skills and contributions to the work unit and organization (8:149). Thus armed, workers can do much to properly establish necessary priorities needed to complete required tasks in available time.

The shiftwork stressor dimension can be minimized by the manager who adopts a participative method of deciding what shift an employee works. An employee allowed to voice a choice in the shift he will work is provided with a sense of autonomy and increased self-esteem. However, these

choices must be followed by management action. Making a choice and having it ignored will damage a worker's sense of autonomy and self-esteem (8:76-77).

Organizing shifts so that rotational assignments are kept to a minimum can reduce the formation of shiftwork stress dysfunction (55:27). Studies have shown that shiftworkers can adapt to positions that require that they work one particular shift permanently (54:43). They are able to reverse the circadian rhythms of their bodies.

The use of flexible work schedules is also indicated as a measure to reduce shiftwork stress. Flexi-time schedules allow the individual to exercise some control over his work time. The manager employing this option must make his decision based on satisfying both organizational and worker objectives (70:145-175). If job needs can not be satisfied by allowing an individual to work the shift of his choice, the manager must make a decision not to allow shift change. A full explanation on the part of the manager to the worker may help alleviate frustration and potential stress.

Humans are social beings and as such they need the support of others. The organization provides for a portion of this need. The perception that support is not available in the workplace can be distressing. Supervisory support has been found to be a major mitigator of workplace stress (26:620). Listening to worker problems and taking positive steps to deal with them is another way the manager can

diminish or reduce the stress resulting from an employee's perception of lack of support (16:16). Fostering a supportive atmosphere (team building) among work group members will also lead to reductions in stress levels (45:126-127). A supportive group of workers can diffuse the effects of non-supportive environments.

Frequent moves such as those experienced by military members are not a part of the job a manager can control. The most that the manager can do is be aware of stressors associated with moving and attempt to mitigate additional workplace stressors that may threaten the relocating worker. A new worker for example, could have significant fears of not being up to the job or being unable to fit in to the social environment of the new work group.

Responsibility for others is stressful. Managers need, at times, to make unpleasant decisions. These decisions may place stress on the manager and the worker (45:115). One way to combat this type of stress is for the manager to carefully consider the impact of his actions in light of organizational and worker goals prior to making a decision. Another way of reducing this stressor's effect is to ensure that workers and managers fit in with the job environment (45:115). An individual whose ideas and level of commitment are consistent with those of the work unit will have a less stressful relationship with the work group.

In the final analysis, the manager must consider that the individual worker has a part to play in the maintenance of an environment free of adverse stress.

A lack of promotion potential (perceived or actual) is stressful and demotivating (58:83-84). Promotion opportunities in the Air Force are based on congressional authorization of total force strength. Therefore, some positions are not responsive to supervisory influence. However, the manager can increase the promotion potential and decrease the stress surrounding it by executing performance appraisals that accurately reflect the potential and performance of workers. Such action provides a realistic appraisal of job performance and places the worker in a positive position for promotion (70:178). Failure to recognize worker achievement through accurate performance reports can result in disenchantment and eventual loss of valuable productive personnel. Promotion provides more than a psychological boost. It provides financial benefit. To many, a raise in salary is the most important factor of job performance in that it helps maintain desired quality of life and achieve status.

Task Stressors. Stresses associated with tasks usually concern the extent of monotony and repetitiousness of a task (92:22). The manager must consider whether this situation exists within his operation. If so, he can take positive steps to alleviate the potential for stress.

Rotating personnel to more challenging positions and using flexible scheduling that gives more autonomy to workers can eliminate potential task stressors (55:19).

Whenever possible, managers should avoid the institution of piecework or quota systems. These have been repeatedly linked to increased accidents and lowered product quality (55:21). Quota systems may force workers to take unnecessary risks due to imposed time pressure and opportunity to increase salary. The lure of additional salary is not a factor for the Air Force worker. However, a supervisor could use a three day pass, or additional days off as a production incentive. If these systems cannot be avoided, every attempt should be made to set realistic goals that can be accomplished safely within the available time.

Technology also causes stress because it relieves the burden of physical labor and often replaces it with monotony and boredom (54:110). The manager must ensure that technological advances does not leave much of the workforce with insufficient work (underload). It may be necessary to train workers to do new jobs.

Personal Stressors. When dealing with personal stressors the manager is apt to encounter problems stemming from individual personality, perceptions of role conflict and role ambiguity, and person-environment fit (PE) inadequacies. Managers must be aware of the different peronality types that may comprise the workforce. Type A,

Type B, and Type E personalities present different potential for workplace stress due to the different ways in which they handle stress (7:120; 8:86). Familiarization with the different coping styles of the personality types will permit the manager to make decisions which minimize or eliminate the types of stress generated by personality predisposition (8:98-99).

The Type A/E stress prone or stress producing personality should be assigned tasks for which the manager has established clear priorities. This reduces the stress the individual creates for himself when he attempts to accomplish several tasks at once and sets unrealistic deadlines (7:121; 45:185-186). If the manager is a Type A/E, awareness of his or her situation is of paramount importance. Type A/E's tend to cause as much stress on subordinates as they place on themselves (45:185).

The affable Type B personality is more apt than a Type A/E to be in line with workunit responsibilities and can serve to diffuse stressors in the work environment. The Type B manager is less likely to develop adverse stressor dysfunction than his Type A/E counterpart (8:86-87).

In dealing with personality stressors in the workplace, managerial awareness is a big part of the solution.

Role conflict can lead to feelings of apathy, futility and tension (61:165). These symptoms arise due to stress as a result of contradictory requirements which incapacitate a

worker's capability to function satisfactorily (58:82-83). In order to reduce or prevent role conflict stress, managers must ensure that instructions and policies are clearly communicated to workers and that requested actions do not conflict with established organizational norms of behavior (70:29-30).

Role ambiguity results from inadequate information about what is expected while performing in a required role (70:30). To remove the threat of this stressor; a manager must insure that the consequences, expected behaviors, and necessary information are relayed to the worker in a clear concise manner (70:30). Seeking feedback from the worker would insure that all aspects of such communications are clearly understood.

Finding the right person for the job is not always easy. Stress arising from a poor person-environment fit is an organizational problem. The manager can tackle this problem and attempt reduction of the causes of poor PE fit. A good place to start is the point at which an employee is being considered for employment (22:291). One example of this measure is the battery of aptitude and attitude tests a person must complete in order to enter the armed forces. This is the first opportunity the military organization has in deciding whether or not a person will fit the military lifestyle. After employment has been attained other avenues of acquiring appropriate PE fit must be explored.

The manager can choose to allow the worker to garner necessary skills that will make him fit in or to modify the workplace to accomodate him (modifying the physical plant to accomodate the physically handicapped worker) (19:169; 22:291). Another method the manager can employ is providing required skill training to the worker. Such training reduces stress and promotes good performance by providing the worker with a sense of esteem and belonging through attainment of desired goals (66:51).

Monitoring the progress of the worker in achieving proper fit will let the manager know if significant obstacles must yet be overcome in this stress reduction attempt. The end result should be a committed, productive employee unhampered by adverse stress.

General Stress Reduction. Taking a quantitative look at stress, we can recognize a potential for significant problems arising from the presence of cumulative stress due to the myriad of stressor agents present in life. In relieving one particular set of stressors, we must consider the effects of other stressors in the individual's universe.

The stress management strategies previously explored can provide relief for the problems associated with given situation/condition. However, the manager can also take steps to reduce the overall perception of a stressful workplace and promote a healthy stress atmosphere. Several methods that serve to ameliorate such a general stressful

condition are available. The manager can apply these strategies to eradicate or adapt his own stressors or to assist his workers in eradicating or coping with theirs.

One approach that has been fostered over the years is the release of stress through the medium of physical exercise (70:249). For Air Force managers, this can be a handy and effective tool. The Air Force places heavy emphasis on physical fitness. Therefore, most places where Air Force people are stationed have recreation facilities and programs designed to emphasize fitness and exercise. The vast majority of these programs are available free to Air Force personnel.

Aerobic exercises (jogging, swimming, and aerobic dancing), which produce sustained heart, metabolic, and respiratory rates for periods of 20 to 30 minutes duration are recognized as consistent predictors of cardio-respiratory fitness (70:249; 92:163). Participation in these forms of exercise results in lower resting heart rate, lower blood pressure, improved oxygen utilization and promotion of favorable blood cholesterol levels (70:250).

People often mislead themselves concerning their true physical condition (70:252). In a study of 641 electronics industry employees; Kreitner, Wood, and Friedman reported the following findings.

1. The average worker thinks he is in good health and physically fit.

2. The average worker is in unsatisfactory shape as far as coronary risks are concerned.
3. The average worker engages in no regular exercise.
4. The average worker is seriously interested in minimizing risks of coronary problems (70:252).

Physical fitness is necessarily a traditional part of military service due to potential combat situations. A person with a healthy body is better equipped to handle stress than one whose body is not in condition (35:37).

Corporate America is beginning to adopt similar philosophies. William B. Baun, manager of health and fitness at Tenneco Incorporation, noted that exercise programs have resulted in reduced absenteeism and medical care costs and boosted morale and productivity (32:18). Baun reported a positive correlation of above-average job performance and regular exercise and a similar relationship between poor job performance and infrequent, or no, exercise.

The manager is looked upon to set the example. Therefore, a manager who is active in athletics and physical conditioning would have a better chance of "selling" his workers on the benefits of physical fitness.

Physical fitness is a way of life for members of Air Force Combat Control Teams (CCT's). Their duties require maintaining a constant state of readiness and being prepared to operate in austere and physically demanding conditions at a moment's notice. It is not an unusual sight to see the

entire CCT, including commander and senior non-commissioned officers performing daily workouts that may include a five or ten mile run.

Corporate fitness experts have observed that fitness programs build teamwork and make employees more alert (32:20). Managers cannot force civilian workers to exercise. This would introduce more stress to the job. Leadership by example will produce the best results.

Creating a positive working climate is another way the manager can institute a stress barrier in the workplace. Shaffer proposed six actions a manager can take that will foster a positive atmosphere in the workplace. These are:

1. Give positive feedback immediately. Kudos for a job done well may be ineffective days or weeks after the fact.
2. Insure feedback is concrete and specific. Identify a specific task that met or exceeded your standards.
3. Don't send phony messages. Make sure that the verbal and nonverbal content and context of messages match.
4. Encourage good performance. Acknowledge errors and shortcomings, but don't dwell on failure. Encourage repetition and improvement of past good behaviors.
5. Gain employee support. Let them know you are on their side and recognize and respect their views even though you can't always agree with them.
6. Recognize your own strengths. Provide the capacity to do the same for others. A positive atmosphere begins with liking and respecting yourself (80:157-163)

Relaxation exercises are another way to decrease the stressors in the workplace (5:48-55). These exercises

usually involve taking a few minutes in a quiet place or at the workstation to practice relaxation of muscle tissues and temporary cessation of work directed thought processes.

A person who is relaxed is able to respond better to stress. Relaxation tends to deter overreaction to stressors, eliminate or mitigate hypertension and other stress related disorders, reduce anxiety, improve productivity, increase level of self-esteem, and improve interpersonal relations (5:42-43). Again, the manager cannot force participation. He can use positive persuasion to interest workers in using this method of workplace stress reduction.

Meditation is another form of stress reduction technique. Like physical exercise and relaxation exercise, it is used on individual level. It can be supported and promoted by the manager to produce a less stressful job environment. Successful employment of meditation relies on the skills associated with it being taught by an experienced practitioner (92:168-169). Potential cost makes this unattractive in most job settings. However, individuals should be encouraged to seek this method if they feel comfortable with it. Meditation techniques range from the eastern mysticism of Yoga and Zen to the eastern influenced, but western adapted, Clinically Standardized Meditation. Each of these methods requires concentration on obtaining an

altered state of consciousness which removes any extraneous thoughts from the mind (58:109; 70:241).

#### Are Stress Management Skills Valuable to the Air Force?

The overriding effect of inadequately handled stress is lowered performance and productivity. Therefore, any learning which fosters a reduction of stress in the workplace must be of some value. The literature provides much support for the recognition of a relationship between stress and job effectiveness or productivity. Eskridge and Coker, in looking at stress in the teaching profession; found reduced efficiency, tardiness, and absenteeism to be frequently caused by stress (25:387). Bagat observed that a reduced level of individual effectiveness is one possible consequence of stress (6:666).

The economic "bottom line" of this situation is underscored by John O'Donnell. He indicates that stress is the cause of 50 to 80 percent of illness (65:82). Hypertensive disease, in particular, produces loss of output that costs approximately half a billion dollars a year.

The serious and costly consequences of stress cannot be overstated. Managers in the Air Force have a significant responsibility to discharge their office with regard as to how they use resources in the most effective and economic manner. People are the manager's most important resource in accomplishing organizational goals. If his people are performing at a diminished capacity due to the effects of

adverse stress, those organizational goals will not be effectively achieved.

"All organizations have a legitimate interest in reducing stress within the work environment. Stress management and preventive health are an integral part of an organization's effectiveness and efficiency. They are essential to achieving optimal organizational productivity" (68:30).

The need for stress management programs and stress management skills is being clearly demonstrated today. Frequently, the courts are finding for the worker and against management and the organization in cases where the employee claims either physical or mental health deterioration due to adverse stress in the workplace (1; 45; 47; 66; 70; 92). The benefits that accrue to the organization in economic terms alone are remarkable. Implementation of stress management programs have resulted in significant cost avoidances to corporations (1:302-305; 65:83-84; 70:294-295). These cost avoidances accrued because company paid health insurance was not overused and more workers were available to work thereby maintaining the productive tempo of the organizations. Loss of productive personnel is another stress related organizational problem. There is a high degree of association between stress and loss of life due to coronary heart disease. Forbes indicates that, for executives alone, American industry

loses between ten and twenty billion dollars annually through lost workdays, hospitalization, and early death caused by stress" (29:51). Reports from corporate sources indicate that simply making workers aware of potential stressors and methods for coping with them are valuable in the reduction of workplace stress (82:52; 89:56-63).

A manager who institutes an effective stress reduction program in the workplace not only saves dollars, but saves lives. Repeated inadequacies in the handling of stress could create an environment saturated with chronic (long term) stress. In attempting to manage stress, managers must be able to recognize the appearance of acute (short term) and chronic stress (62:11-7). Albrecht noted that people handle short term or episodic stress (crisis situations) well. However, continuous stress (chronic stress) can lead to serious health breakdown (1:64-65). Smith felt strongly that, "chronic stress should be our greatest concern" (this "chronic stress" leads to the costly illness which robs an organization of money and personnel) (85:14).

The United States Clearing House for Mental Health Information reported a \$17 billion annual decrease in productive capacity of United States industry in the last few years because of stress induced mental dysfunctions. Industry and health groups estimate the cost being closer to \$75-90 billion annually (68:14).

The importance of this issue will become clearer as we face another round of DOD fiscal and manpower belt tightening. The need for stress management initiatives to keep our workers motivated and productive will be even more justified as we are asked to do more with less. Management initiative that results in retention of valuable personnel is a necessity.

#### IV. Conclusions and Recommendations for Future Research

##### Conclusions

The comprehensive examination of stress literature provides insight into a major problem for individuals and their organizations. The problem of adverse stressors in the workplace is often compounded by our misunderstanding of and inappropriate reaction to stressors. We learned that all stress is not harmful and that a certain degree of stress is necessary for exercise of full potential of the human organism. The debate on the definition of stress contained a wide spectrum of ideas that spoke not only to causation, but also to cognitive response to the stress situation.

A major point in the discussion was the need to be able to recognize that an individual is experiencing some sort of adverse stress before being able to take positive steps to reduce or eliminate its harmful effects. Definitions of stress were numerous and often influenced by the cognitive perceptions of the individual describing or experiencing the phenomena. On a general level there are physiological, psychological, social, and environmental causes of stress. Even relatively routine occurrences in the course of human experience can be perceived as stressful life events. The effects depended on the manner in which the individual responded to them. As various as the definitions of stress

is the capacity of individuals to adapt to, or repulse, the negative perceptions of its consequences.

This study focused on the combination of these aspects as they manifest themselves as organizational causes of stress. Lower organizational productivity results when individuals are stressed to a point at which they are denied opportunity to reach their fullest potential.

Once the general ideas that constitute the various dimensions of the definition of stress had been reviewed, we looked at how stress affects productivity. Stress does adversely affect the productivity of both the individual and his organization. However, the manager can have a positive effect on the outcomes of stressful situations in the workplace, if he is able to recognize the presence of adverse stressors and institute management techniques that would control or eliminate them. Intervention strategies can be implemented on either an individual or organizational level. The goal of these strategies is the alleviation of adverse reaction to stress because these reactions are counterproductive to the organization's objectives.

The manager's responsibility for productive organizational activity is the major factor behind the propagation of efforts to manage the stressors in the work environment. The welfare of the workers is incidental to this factor. Organizational value of stress management efforts can be appraised in both human and economic terms.

Workers in less stressful conditions are healthier and, subsequently, more productive.

The appendix of this thesis addresses a working definition of stress. It explores some common causes of worker stress. Strategies for alleviating stress in general, as well those specifics that deal with the organization, are also examined.

The efforts of each individual Air Force manager contribute to the overall success or failure of stress management programs in the workplace. The "bottom line" for successful Air Force operations is an increased state of readiness. This is the desired outcome of operations, no matter how routine, as part of the defense posture of the United States of America.

#### Recommendations for Future Study

This compendium could not consider all of the various aspects of the stress problem. Concentration on the organizational causes and appropriate stress management stratagems was merely the "tip of the iceberg". One major area excluded from this study was the consideration of the effects of organizational stressors on family life and, conversely the effect of family life stressors on organizational performance.

Another area of consideration would be to examine the effects of stress on the performance of military members who are married to other military members or are married to

someone also pursuing a career. The two-career couple is rapidly approaching the societal norm rather than the exception. Division of responsibilities for maintenance of home and career could be a major point of contention.

Women are a large part of the military workforce. A study of the organizational effects of stress on working women could be beneficial. The changing role of women in the workforce warrants investigation of them in relation to stressor activity (17:111; 28:74). In the Air Force, for example, we find women working in what are considered non-traditional jobs (pilots, aircraft mechanics, missile crewmen). These jobs formerly were exclusively in the male domain.

Some jobs appear to be more stressful than others. Examination of the components of a job in this category would increase knowledge on the subject of job stressors.

The possibilities for research in this area are boundless. There is always more to learn when we endeavor to study aspects of the human condition.

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STRESS MANAGEMENT: A HANDBOOK FOR AIR FORCE MANAGERS

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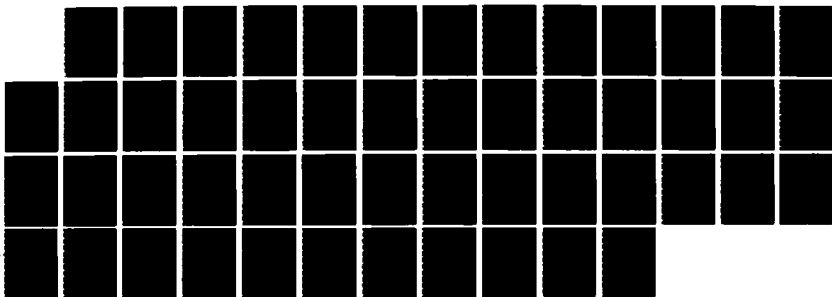
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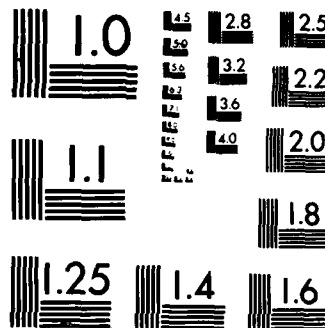
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Appendix

**STRESS MANAGEMENT HANDBOOK**

**FOR**

**AIR FORCE MANAGERS**

## PREFACE

Aspects of military life that make the Air Force unique are not without some risks. Losses in productivity and effectiveness of personnel and organizations result from work stress in general and stress that is inherent in specific jobs. Information on stress although widely available is often too technical and time consuming for the busy manager to acquire.

This handbook is a compendium that consolidates some of the information necessary for an Air Force manager to successfully recognize problem-causing work stress and take action to control or eliminate it. Use of the stress management strategies contained here could help the manager to maintain optimal levels of productivity at a time when Air Force managers are frequently being asked to do more with less of our valuable people resource.

I wish to express my sincere thanks to my thesis advisor Major Phillip Miller, my reader Dr. Guy Shane, and last but not least my wife and editor Joan and my son Christopher for their patience and understanding.

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## **CHAPTER ONE.**

### **● WHY STUDY STRESS MANAGEMENT?**

Stress is a major factor in the loss of productivity and illness in the workforce. Stress presents problems when we don't react properly to its presence in our lives. Organizational productivity losses due to stress amount to more than 90 billion dollars a year in the United States alone. Lost production results from increased absenteeism, poor job performance, increased personnel turnover, increased corporate insurance/health care costs, and higher personnel costs arising from the need to hire more people to maintain desired production levels.

Stress can also cause the break-down of mental and physical health of workers. The list of mental and physical disorders that are linked to stress is long. It includes depression, anxiety, high blood pressure, coronary heart disease, alcohol/drug abuse, diabetes, some forms of cancer, skin disease, ulcers, aggression, insomnia, sexual dysfunction, low self-esteem, appetite loss, overweight, headaches asthma, and cessation of menstruation.

Managers are responsible to maintain a productive organization. To do this, they must take

some responsibility for the well-being of their workers. A manager who knows something about stress management is more capable of fulfilling his responsibilities than is a manager without this knowledge.

Right now, money is tight in the Air Force and Department of Defense. We must do more with less. A manager armed with stress management techniques is better equipped to deal with workplace stressors. This ability helps make the most of the material and personnel resources available.

#### SUMMARY

This is a handbook for the manager. He can best observe the worker and the effect that organizational stress is having on him and the organization. He can take appropriate action to remedy unhealthy or counter-productive situations. The organization's people are the manager's most important resource. Without these people, the equipment and weapons systems under his control are useless. The best use of people resources should be a manager's greatest concern.

## CHAPTER TWO

### ● WHAT IS STRESS?

Stress is defined in many ways. Dr. Hans Selye, a Canadian physician, was the first to identify what he called the stress syndrome in 1936. Selye, views stress as "the non-specific response of the body to any demand". The reason for use of the term "non-specific" is that everyone seems to react differently to stress.

Matteson and Ivancevich described stress as "the physiological or psychological response you make to an external event or condition called a stressor". One definition of stress in Webster's New Collegiate Dictionary considers stress as "a physical, chemical, or emotional factor that causes bodily or mental tension and may be a factor in disease causation".

Some amount of stress is seen as beneficial and even necessary for the proper functioning of human beings. However, excessive or adverse stress can cause disease and interfere with normal work performance.

No matter how we look at it, stress is a management and organizational problem. The manager needs to arrive at his own working definition of

stress. This done, he can start to deal with stress in his workplace.

What is stressful for one person is not necessarily stressful for another. All stress is not associated with negative behaviors. There is positive stress associated with athletics and exercise. Drive and ambition are stressors that allow success in a chosen profession.

An individual's perception of a stress situation determines how he will react to it. The degree of stressfulness of the situation relies on the value an individual places on possible outcomes of the event. For example, if a worker's job calls for a certain number of units of production a day and he consistently fails to meet the quota he may suffer adverse stress. This is especially true if such failure means he will be fired.

Stress reactions include the sensations a person may experience when faced with adverse or harmful stress. Examples of these are jitteriness, sweaty palms, hair standing on end, and feeling uneasy. These reactions let an individual know that something is wrong. Recognizing stressors through physical and mental signals is the first step in managing stress.

## SUMMARY

Remember, all stress is not negative. Adverse or problem causing stress reduces productive activity in the workplace. A worker under adverse stress is not giving maximum attention to the job. High blood pressure, coronary heart disease, and cancer are often fatal. These illnesses are linked to stress. A dead or seriously ill worker is not productive. The less severe physical problems linked to stress (diabetes, ulcers, headaches, asthma) can cause a worker to be less productive than he would be if he were feeling his best. The emotional problems associated with stress affect not only the worker but his fellow workers. An irritable individual is impatient and difficult to work with. This person becomes a source of stress for others.

## CHAPTER THREE

### ● HOW DO WE RECOGNIZE STRESS?

The ability to recognize stress concerns what is commonly called the "flight or fight response".

This describes several changes that our body goes through in a primitive preparation to either defend against a threat or leave the scene. In this response; muscles tense, the glands secrete large amounts of adrenaline which further excites the individual, the pupils of the eyes dilate, bladder and bowel muscles loosen, the digestive process stops, the breathing rate is increased, the blood clotting mechanism is activated to minimize blood loss, and quick energy is gained from release of stored sugars.

Primitive man used this response to stay alive. Modern man can't give in to this response. It is not socially acceptable to kill or beat up your supervisor because he is demanding more than you can deliver. This is where a stress problem can begin to manifest itself. Inability to carry the fight or flight response to its ultimate conclusion has introduced a serious problem into modern life. The manager can learn to recognize signs and symptoms of

adverse reactions to stress. He can then take steps to alleviate the conditions causing these reactions.

Some signs of stress are easier to recognize than others. Some signs are internal. The individual knows something is wrong but no one else does. The manager can also experience stress. Being able to recognize his own stress reactions is important when he tries to deal with the stress experienced by his workers.

The following list of stress signs and symptoms is comprehensive but by no means exhaustive.

- DIFFICULTY IN MAKING MAJOR AND MINOR DECISIONS
- EXCESSIVE DAYDREAMING (GETTING AWAY FROM IT ALL)
- INCREASED USE OF CIGARETTES AND/OR ALCOHOL
- DRUG ABUSE (TRANQUILIZERS AND "UPPERS")
- THOUGHTS TRAIL OFF WHILE SPEAKING OR WRITING
- EXCESSIVE WORRY ABOUT ALL THINGS
- SUDDEN OUTBURSTS OF TEMPER AND HOSTILITY
- FEAR/MISTRUST OF FRIENDS, FAMILY, AND COWORKERS
- FORGETTING APPOINTMENTS DEADLINES AND DATES
- FREQUENT BROODING AND FEELINGS OF INADEQUACY
- REVERSALS IN USUAL BEHAVIOR
- ACCIDENT PRONENESS
- OVERSENSITIVITY TO CRITICISM

- EXCESSIVE EATING OR APPETITE LOSS
- IMPULSIVE BEHAVIOR
- RESTLESSNESS AND TREMBLING
- NERVOUS LAUGHTER
- ABSENTEEISM
- JOB DISSATISFACTION
- POOR INTERPERSONAL RELATIONS
- LOWER PRODUCTIVITY
- VIOLENT AND AGGRESSIVE BEHAVIOR (physical and verbal)
- FATIGUE
- BOREDOM

#### SUMMARY

Being aware of these signs is an important starting point in alleviating workplace stress. The manager should observe his workforce on a regular basis. He is in a position to notice changes in individual worker behavior that might indicate an adverse stress reaction. Recognizing the problem is a necessary step in eliminating it.

Among the more easily recognized signs of stress are; increased smoking, short temper and violence, aggressiveness, oversensitivity, poor relations with fellow workers, excessive fatigue, and absenteeism. Those most difficult to recognize at the onset include excessive daydreaming, drug abuse, worry,

fear of others, brooding, depression, and boredom. These reactions are often passed off as temporary. By the time they are recognized as long-term, a lot of damage can already have been done.

Being alert to the overall well-being and consistent behavior of workers help the manager to recognize adverse reactions in time to keep them from doing damage.

One or two symptoms of adverse stress don't always indicate a long term problem. Irritability and increased smoking can mean the individual has just started a diet. Almost everyone exhibits symptoms of stress at times. When the symptoms become long-term, numerous, and interfere with the individual's job performance; the manager has an obligation to intervene.

## CHAPTER FOUR

### ● WHAT CAUSES ADVERSE STRESS?

The debate on the causes of adverse, or problem, stress takes as many directions as it does in determining just what stress is and how we recognize it.

Charlesworth and Nathan identified several categories of stressors.

- Emotional: things that cause anxiety and fear (worry about exams, job, unpaid bills)
- Family: concerns interaction of family (parenting, marital problems, care of aging parents)
- Social: concerns interaction with people outside the family (job position/status, social status)
- Change: concerns limits to amount change of humans can stand (changes in technology, relationships, job)
- Chemical: concerns drug/alcohol abuse, food additives, air/water pollution
- Work: concerns tensions/pressures of workplace (including shiftwork), impossible deadlines, role ambiguity/conflict, information overload, inability to visualize individual contributions
- Commuting: depends on distance from work and frustrations of a long commute
- Phobic: concerns exaggerated fears of certain animals, places or objects which an individual knows pose no real immediate danger (heights, crowds, small spaces)
- Physical: concerns demands that change the physiological state of our bodies (lack of sleep, poor diet, menstrual discomfort, injury)

- Disease: long or short term disorders that can cause, and are aggravated by, stress (ulcers, allergies, hypertension, arthritis, asthma)
- Pain: concerns the aches and pains of old and new accidents or injuries
- Environment: concerns factors we can't always avoid (temperature changes, overcrowded office space, loud machine noise, silence)

Some routine occurrences in our lives have been shown to cause different degrees of stress. Holmes and Rahe developed a list of 43 occurrences that they dubbed Stressful Life Events. They related these events to the formation of stress reaction. Included in their list were such things as marriage, divorce, change in work hours or conditions, personal injury or illness, and death of a spouse. These 43 items were rank ordered and assigned a specific value.

The highest stressful life event was death of a spouse with an assigned value of 100. The lowest was a minor violation of the law with an assigned value of 11. Using this measure on experimental subjects Holmes and Rahe were able to show that 50% of people with a score of 150-300 reported an illness within the next year following the experiment, while 70% of those with stressful life event scores over 300 reported significant illness

during the following year. This establishes a causal relationship between stress and illness.

#### ORGANIZATIONAL STRESSORS

A manager is not in the position to alleviate all life stress. His efforts should be directed at stressors that can be traced to the organization.

The following list describes several specifically organizational causes of stress.

- Physical: This area is concerned with inadequacies of temperature/climate, lighting, noise level, and workspace. Stress is caused by temperature and humidity extremes, glaring or poor illumination, exposure to stressful noise levels (flightlines, construction sites, electrical powerplants), and workspaces either too large or too small for the number of people who work in them. Collectively and individually, these stressors tend to disrupt normal functions, hamper concentration, increase risk of accidents, and induce illness.
  
- Overload/Underload: Overload stress results when an individual thinks that there is too much work to be done in too little time or he doesn't have

the skills for required tasks. Underload results when the individual thinks that tasks are insufficient in comparison to his time available or his skill level. Both these stressor conditions result in lower job performance, increased absenteeism, anxiety, depression, alcohol/drug abuse, job dissatisfaction, overeating, impaired judgement and reasoning ability; and, sometimes, death. Too little work can be just as stressful as too much.

- Time Pressure: Americans live in a very time sensitive society. At work, home, or even in the car; a clock is nearby. At work we experience a constant sense of urgency, tight schedules, and deadlines. This leads to a feeling of chronic time overload (worker always feels trapped and behind schedule). The symptoms of this are anxiety, depression, psychosomatic illness, and heart attacks.
  
- Shiftwork: Shiftwork is work performed at times other than the normal day shift. It is a major source of organizational stress. Shiftwork disrupts the circadian rhythms (the body's biological clock). This can lead to abnormal

functioning of temperature, cardiovascular, respiratory, endocrine gland, and autonomic nervous systems. Humans are biologically predisposed to a day-night orientation. Our society is geared to this orientation. The shiftworker is unable to interact normally with his family and society at large. Workers who do not adapt to shiftwork are at greater risk of accident, lower productivity and commitment to the job. They suffer various kinds of mental and physical damage.

- Lack of Support: Thinking that there is a lack of supervisory support produces a negative effect on a worker's sense of worth and place in the unit. This notion, if allowed to persist, leads to job dissatisfaction. Eventually the worker will work less efficiently, possibly sabotage the work of others, and finally leave the organization.
  
- Frequent Moves: For Air Force managers, the stress from frequent moves is always present. It seems the manager or his workers are in a constant process of PCS or TDY. Moving is associated with the stress of change. The worker is affected by changes required in job, family life style, and

social and community involvement that are part of each move.

- Promotion Opportunity: Promotion is a measure of an individual's worth on the job. Short of writing appropriate effectiveness reports, the Air Force manager has little input concerning promotion of his workers. Failure to be promoted results in an individual becoming dissatisfied with his job, developing poor self-esteem, abusing alcohol, and being absent from the job. If promotion is continually denied, the individual will leave the organization.
  
- Responsibility for People: Being a manager can be tough. Be it a workcenter, squadron, or wing; the boss has a tough job. He is not only responsible for equipment, buildings, projects, and reports; he is responsible for people. His responsibility for people causes him the most stress. Managers must be aware of this factor. Overstressed managers can cause an equal, or greater, amount of stress for their workers. This stressor often results in heavy use of tobacco/alcohol and hypertension.

- Task Factors: This area is usually concerned with factors that are part of getting the job done. Job design characteristics and technology are prominent task stressors. Assembly lines and piecework designs are particularly stressful. Assembly line operations are characterized by monotony, repetition, regimentation, lack of opportunity for social interaction, time pressure, and simultaneous exposure to overload and underload conditions. Researchers have found high absentee rates, inability to relax, and high rates of psychosomatic disorders in workers involved in assembly line operations. Piecework operations are based on workers achieving a set production goal or quota. These jobs are associated with repetitive tasks for which the worker is paid according to a designated number of units produced. The lure of greater pay overrides safety considerations. As a result, workers in these types of jobs tend to suffer more accidents. Time pressure and overload which results from internalizing external demands (quotas) increases incidence of health problems. Technology contributes to task factor stressors. It produces large amounts of idle time that causes underload stress.

- Personality Type: Much of the research on stress asserted that individual personality plays a major role in the formation of stress. Adaptability to stressors is based on individual perceptions of stress and on an individual's predisposition to handling stress. Three stress response personality types have been described.

#### Type A

The Type A personality tends to create significant amounts of adverse stress for himself and others. He is characterized by a constant need to excel, impatience, aggressiveness, buried insecurities (often visible to others), being very critical and demanding of others, an inability to relax, being easily angered, setting unrealistic deadlines for himself, being intolerant of mistakes, speaking rapidly and loudly, desiring approval of superiors not peers, seeking status, and valuing himself based on the quantity of his accomplishments. These attributes make him prone to development of coronary heart disease, high blood cholesterol levels, and high blood pressure.

#### Type B

Type B personality is the opposite of the Type A. This personality type tends to be flexible,

non-competitive, non time dependent, and not obsessed with status and materialistic standards. The Type B personality is less likely than the Type A to cause unnecessary stress for colleagues or subordinates.

#### Type E

Recently, a Type E personality has been identified. The Type E is similar to the Type A. However, it is exhibited by women experiencing conflict from trying to satisfy career objectives as well as family/community/societal ones. Their symptoms are similar to those of their male Type A counterparts. Women are an increasingly large part of our workforce. Recognizing the Type E personality is important to managers. Few people are completely one personality type. Most people tend toward one type with it becoming more or less dominant depending on the situation.

- Role Conflict: "Role" is the combined set of expectations we have for ourselves and that others have for us. Stress results when we don't live up to those expectations. Work demands intrude on other aspects of life. The symptoms of role conflict stress are heart disease, hypertension, anxiety, and job dissatisfaction.

- Role Ambiguity: Role ambiguity results when an individual does not know how he is supposed to behave in his role. When an individual can not get instructions for successfully performing a task, he suffers role ambiguity. The individual experiences uncertainty when the consequences of his job performance are not clearly stated. An individual can successfully adapt to short term ambiguity. However, chronic ambiguity leads to depression, anxiety, low job/life satisfaction, and lowers motivation to work.
  
- Person-Environment Fit: The expression "the right tool for the job" exemplifies the desired relationship between the job and the worker. Stress results from a mismatch between the skills and talents of the worker and the job environment. A worker's attitude may not be in line with what is desired by the organization. This mismatch, or poor person-environment fit, can lead to lower organization productivity and job dissatisfaction, illness, and depression for the worker.

### SUMMARY

Stressors do not operate in a vacuum. More than one stressor may be active at a given time. Managers must know which stressors are currently the problem. If stress continues unchecked productivity and effectiveness (individual and organizational) will suffer.

## **CHAPTER FIVE.**

### **● WHAT THE MANAGER CAN DO ABOUT STRESS IN THE WORKPLACE**

#### **LEARN TO MANAGE YOUR OWN STRESS FIRST**

The most important thing a manager can do in managing workplace stress is to discover what he finds stressful. Once this is done, he can take action to reduce the stress he is experiencing. What works for the manager will not necessarily work for others. Reactions to potentially stressful situations vary according to the individual. However, a working knowledge of stress and stress management will prepare the manager to deal effectively with many of the stressful situations that arise in the workplace.

#### **CONDITION THE ENVIRONMENT**

The manager is responsible for production within his section. He must provide an atmosphere which encourages optimal production and provides minimal adverse stress. Creating a positive work climate is a good place to begin conditioning the work environment. The following list consists of six

approaches that the manager aware of stress in his work area can use to his advantage.

- GIVE POSITIVE FEEDBACK. That "pat on the back" for a job done well should be given as soon as possible after the event. Praise that is long in coming may appear hollow and insincere.
- INSURE FEEDBACK IS CONCRETE AND SPECIFIC. Identify specific task(s) that are worthy of special recognition.
- DON'T SEND PHONY MESSAGES. Make sure that verbal and nonverbal content and context of messages match.
- ENCOURAGE GOOD PERFORMANCE. Acknowledge errors and shortcomings but don't dwell on failure. Encourage repetition and improvement of past good behaviors.
- GAIN EMPLOYEE SUPPORT. Let them know you are on their side and recognize and respect their views even though you can't always agree with them.
- RECOGNIZE YOUR OWN STRENGTH. This provides the capacity to do the same for others. A positive atmosphere begins with liking and respecting yourself.

The Air Force manager can add physical exercise to his list of stress reduction methods. Corporate physical fitness managers have noted that exercise programs have reduced absenteeism and medical care costs and boosted morale and productivity. The recreation facilities at most military duty stations are varied and well equipped. Lead by example. A physically fit, well adjusted manager presents a convincing case as to the value of exercise.

Physical activities aimed at group participation foster teamwork and unit cohesion and relieve stress. Section or intramural sports serve this purpose. Aerobic exercises also serve to condition the individual/organization) for less stress. The benefits of exercise include lower blood pressure, improved use of oxygen by body tissues, lower heart disease risk; and, most importantly, less stress.

#### ADDRESS SPECIFIC ORGANIZATIONAL STRESSORS

Having examined the organizational climate and taken action to condition the environment for minimal stress, the manager can begin to address specific organizational stressors that may be affecting his workers. For starters; ensure that temperature, lighting, noise levels, and workspace are appropriate to the task. While these physical stressors may appear minimal, they are consistently mentioned in stress literature as potent workplace stressors.

Overload and underload stress can be alleviated by the manager. Work sharing and delegation systems can improve individual worker productivity and significantly reduce overload stress. The use of frequent short breaks (5 minutes) for work that

requires heavy concentration and less frequent longer ones (10 minutes) for work that requires constant physical exertion will reduce fatigue and maintain optimal performance levels. Break areas should be designed so that they do not resemble the work area. A flexible time policy can also alleviate overload stress. A "flexi-time" policy allows the worker a degree of autonomy in planning his work time around mandatory core hours and can reduce stressful feelings about other parts of the job. Relief of overload stress fosters increased productivity, decreased absenteeism, and increased commitment to the organization.

Underload stress is relieved when the manager successfully tries to ensure that assigned tasks are as challenging as possible without overloading. With those jobs that are viewed as monotonous, repetitive, or boring; attempts must be made to take the worker out of these jobs and allow him to do something different. Even if the change is only temporary, enriching underload jobs relieves worker stress and improves productivity.

Time pressure stress can be relieved by well planned scheduling. Allow enough time for a task based on the abilities of the worker. Encourage workers to be aware of their duties, authority,

responsibilities, and the importance of their skills and contributions to the organization. This will allow them to establish their priorities. Work will be accomplished more efficiently and in a less time urgent manner.

Shiftwork stress can be minimized if the manager takes worker preferences into consideration. As with flexi-time, this option gives the worker a sense of having more control over his worklife. It isn't always possible to accomodate everyone's shift desires and still meet production goals. Whenever it is possible, alternatives to shiftwork should be explored.

Some jobs use rotating shifts. For example during a given six to nine day period, a worker is rotated through all three (day, swing, and grave) shifts. Workers have the feeling of "meeting themselves coming and going". Rotating shifts are the most distressing form of shiftwork and should be avoided whenever practical. If rotating shifts are necessary, a longer break period between shifts will help to stabilize the worker.

Frequent moves are a part of military life. High personnel turnover disturbs the cohesiveness of the organization and creates problems for the manager and the workers. The military manager does

not have control over such movement into and out of his organization. Being aware of the stress resulting from frequent moves can help the manager minimize its effects. There are many concerns for the individual being moved. Take, for example, a Staff Sergeant moving with his family from an overseas base back to the States. He must report to his new job and get oriented to that. However; he must also help his wife find a house, get the kids into school, buy a car, and so on. Financial and family concerns mount during these moves. Tempers at home and on the job flare. If the manager is aware of potential problems and alert to signs of stress, he can make a worker's move smoother. Giving the individual ample time to get his personal situation settled before expecting him to report for full-time duty is within the area of the manager's responsibilities.

The manager should also realize that losing a fellow worker and gaining a stranger has an effect on those remaining. Some may experience a sense of overload from trying to get the job done with fewer experienced people. Some may experience a sense of loss when a friend leaves and resent the new worker. Reactions will vary. The manager must be aware of

any changes, and be prepared to act on them before they become problems.

Promotion opportunity is not something the Air Force manager can control. He can make sure he writes good, complete effectiveness reports but that is the only input he has to the promotion system. In the Air Force, only a certain number of people are promoted during each cycle. The promotion system is very competitive.

The manager can give all his workers opportunities to shine. He must know his workers well enough to know their strengths and weaknesses. Give an individual opportunities to do what he does well. Congratulate him on a job well done. Give him a chance to do something challenging.

The manager may not be able to promote the worker but he can give him opportunities to do his best. This fosters a good self-image, job satisfaction, and organizational production.

Lack of supervisory support can be alleviated if the manager fosters team building in the workplace. Managers operating in this manner act as a buffer between the worker/upper management levels. They can let workers know upper management's expectations without seeming demanding or patronizing. Workers can trust a manager who is part of the "team".

Responsibility for others is stressful. This stress can be diffused if the manager realizes that his decisions won't satisfy everyone. All management decisions must be made taking into consideration the impact they will have on organization and worker goals. Workers in the organization should be made aware of the problems related to managerial decision-making. Making subordinates aware of his situation may relieve some of the responsibility stress experienced by the manager.

The manager must be aware of personality types and the characteristics associated with these. Type A/E personalities tend to expect too much of themselves. They should be assigned tasks with clear priorities. Adequate time should be scheduled so the individual does not feel pressure to rush through the task. When choosing supervisors, the manager should remember that the easy-going Type B personality is likely to be more in line with organizational attitudes and objectives and less likely than his Type A/E counterpart to cause distress for his subordinates.

Role conflict stress is relieved when managers ensure that instructions and policies are clearly

communicated and that requested actions do not conflict with organizational behavior norms.

Role ambiguity is diminished by the manager who communicates clearly and concisely the consequences, expected behaviors, and information necessary to complete task assignments.

It is not always easy to find the right person for the job. To relieve the stress resulting from poor person-environment fit, the manager should either provide training to adapt the worker's skill to the job or modify the job where possible to accomodate the worker's skills.

#### SUMMARY

There will be times when the manager cannot alleviate an individual's stress. The worker who leaves the job every afternoon and proceeds to drink himself blind at home each evening probably has problems the manager can't ease. This doesn't become the manager's concern until it affects the individual's job performance. Even a stress-aware manager can't be expected to handle severe mental or physical problems. It is his task to recognize that the problem exists and help the individual seek outside help. The Air Force provides chaplains, mental health professionals, family support centers,

and drug/alcohol abuse counseling. The manager should be aware of these resources and willing to refer personnel to them.

Stressor activities do not occur in a vacuum. The stress educated manager is better equipped to manage the stressors in his work environment and to foster improvements in organizational and worker productivity and health.

Use this handbook to serve as an appetizer to your banquet of stress management studies. When you've completed your feast, you will have added new depth to your leadership dimension. The list of suggested readings will provide broader information on specific subjects. Bon appetit!

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### Vita

Captain Wayne R. Byron was born on 28 April 1951 in Port of Spain, Trinidad. He emigrated to the United States in 1960 settling in Brooklyn, New York, where he completed high school in 1968. He enlisted in the Air Force in 1971 and served as a vehicle operator/dispatcher for four years. He retrained in 1975 and served four years in the training management career field. He graduated from Saint Martin's College in Olympia, Washington in August 1978 and was awarded the Bachelor of Arts degree in Psychology and Sociology. He was commissioned through the USAF Officer Training School program in August 1979. In his first assignment after commissioning he served as Vehicle Operations Officer and Traffic Management Officer at Cannon AFB, New Mexico. In May 1982 he was assigned to Clark Air Base, Republic of the Philippines serving in the same positions and adding duty as Chief of Transportation Programs and Mobility. While at Clark he completed 27 semester hours of the 36 hour Master of Science in Systems Management program with the University of Southern California. He remained at Clark until entering the School of Systems and Logistics, Air Force Institute of Technology in May 1985.

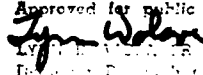
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This study researched the applicable literature on stress. Emphasis was placed on management of organizational stress. A comprehensive literature review was used to define stress, determine how to recognize stress, determine how stress affects work performance, determine what the manager can do about stress, and determine the value of stress management skills to the Air Force. Positive support was found for the effectiveness of stress management strategies employed by the manager to reduce or eliminate workplace stress. Workplace stressors were shown to have an adverse effect on the productivity of organizations and personnel. Lost productivity most often resulted from absenteeism, illness, and dysfunctional behavior. Research showed that the manager able to use stress management techniques and strategies could successfully reduce or eliminate workplace stress and subsequently improve individual and organizational productivity. The handbook developed as an appendix to this thesis is a compendium that condenses stress management information in a manner that is easily accessible to the manager.

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